APPENDIX P

SDEIS COMMENT SUMMARIES AND RESPONSES

2 **PURPOSE AND NEED** (S16, C1, Various WC)

Comment Summary 2-1 Commenters support the need for a natural gas pipeline to provide energy to Westchester County and New York.

2-1 Thank you for your commen

Comment Summary 2-2: Although the current administration has championed the need to seek new energy sources, this need does not require the certification of a route that is clearly ill-designed and fraught with safety and environmental concerns. There should not be a rush to judgment where there are viable alternatives that can be explored. For instance, there is the Algonquin right-of-way and the Iroquois system. Iroquois has filed an interesting proposal that addresses the issues that this pipeline seeks to cover. Why not suggest that Millennium/Columbia and Iroquois work together on this highly sensitive project.

2-2 We believe that the 9/9A Proposal and the ConEd Offset/Taconic Parkway Alternative have been designed to minimize environmental impacts to the greatest extent possible, although both routes have been criticized by those who would be affected by them. We are not aware of any proposal by Iroquois to transport Millennium's volumes through Westchester County, although Iroquois has commented on the Eastchester Expansion System Alternative (commenter O2). While we have evaluated system alternatives using the Algonquin and Iroquois pipeline systems, no system alternative has been proposed by either Algonquin or Iroquois (see section 3.2.8 of the FEIS). In any case, transportation of Millennium's proposed natural gas volumes into the New York City area would involve impacts somewhere in Westchester County.

Comment Summary 2-3: Chairman Helmer of the PSCNY stated, in an October 2000 letter to an elected official representing the 9/9A Coalition in Opposition to the Proposed Millennium Pipeline Route, that the 9/9A Proposal "was developed by Millennium perhaps without the planning that siting a major energy facility deserved, and was found to be only minimally acceptable to us." In a September 2000 letter to the FERC, Chairman Helmer asked the FERC to "assess alternatives in the context of New York's overall need for additional capacity to meet growing demand." The FERC should give special consideration to a regional effort -- a cooperative effort involving system-sharing, a safe and cost-effective plan that is in the best interest of the people and their growing energy needs rather than in a corporation's self-interest.

2-3 As stated in section 3.0 of the SDEIS and again in section 3.2.8 of the FEIS, the NGA and its implementing regulations do not mandate projects by parties who have not agreed to own and operate facilities on a joint basis.

Comment Summary 2-4: The municipalities of Croton, Ossining, and Briarcliff Manor reiterate support for the need to increase energy supplies in the northeast and strongly endorse the FERC suggestion that the PSCNY revise its MOU to incorporate the Con Ed Offset/Taconic Parkway Alternative.

2-4 Comment noted. The SMOU (issued after the publication of the SDEIS) specifies the requirements that Millennium would follow when placing the pipeline within the ConEd easement.

Comment Summary 2-5: The Commission should review the need for and viability of the Millennium Project in light of the fact that the Canadian sponsors of the upstream facilities have withdrawn their application for the Canadian portion of the pipeline. This clearly raises a question as to the viability of the Millennium Project. The U.S. portion of the project may have also changed since it was filed in 1997. Millennium now claims seven customers.

2-5 We have recommended that Millennium may not begin construction of any part of the U.S. portion of the Millennium Project until it files copies of the appropriate permits from the Canadian NEB.

3. **EIS PROCESS AND COMMENT PERIODS** (S1, S6, S9, S10, S11, S13, C1, C5, C9, C2, C3, C4, C10, C1 C12, C13, C14, C16, O3, O5, O6, O8, O9, O14, O18, O19, Various WC)

Comment Summary 3-1: On February 28, 2001, Westchester County requested that the FERC convene a "discovery process" to determine to what extent existing and other proposed pipelines (Iroquois Gas, Algonquin, Transco) working in conjunction with Millennium could deliver gas to this regional marketplace. No answer was received. Such a meeting is even more urgent as it becomes clear just how many problems are being faced in trying to locate a major transmission line through a heavily populated county. The FERC should not approve individual pipelines (e.g., Millennium or Iroquois) until there is a complete plan for the region and a look at alternative solutions.

3-1 In section 3.0 of the SDEIS, we responded to this request. It also had been made by several local government officials in Westchester County. As stated in the SDEIS, while the Commission encourages projects involving the least environmental disruption, the Natural Gas Act and its implementing regulations do not mandate projects by parties who have not agreed to own and operate facilities on a joint basis. Also, no competing applications have been filed. Therefore, the Millennium application, which proposes specific facilities, with markets supported by executed precedent agreements, must be processed.

Comment Summary 3-2: A second supplement to the SDEIS must be prepared that fully evaluates the environmental consequences of the ConEd Offset/Taconic Parkway Alternative. This evaluation cannot be done in a FEIS because it would deny the affected parties their due process rights to be given notice and an opportunity to comment on the proposed actions and their potential impacts. This is required under NEPA

3-2 We have included an environmental analysis of the ConEd Offset/Taconic Parkway Alternative in section 6.2.6 of the FEIS. We notified affected landowners and abuttors along this route on April 26, 2001, we conducted a noticed site visit, and have accepted and continued to accept comments on this alternative through publication of the FEIS, allowing a total of 4 months for comments. We believe we have fulfilled our obligations under NEPA to assess the environmental impact of this alternative and to allow public comment on it. We do not believe that a supplement to the SDEIS and subsequent comment period would introduce new concerns that have not already been identified.

Comment Summary 3-3: At the end of the NEPA review process, a panoply of site-specific construction conditions, mitigation measures, and enhancement projects will be relegated to be handled "off-line" and out of the public sphere. The mitigation measures identified in the SDEIS are generalized and appear to contemplate leaving the bulk of the decisions regarding the mitigation details to be made in the field, post-certificate. The village remains steadfastly opposed to the various proposed pipeline routes but, at the same time, understands that for whatever route the Commission eventually certifies, it will be critical to secure appropriate conditions, mitigation measures, and enhancement strategies. The village therefore expressly reserves the right to submit additional comments and/or engage in site-specific negotiations regarding construction conditions at the appropriate subsequent time.

3-3 We identify "generalized" mitigation measures where we have found concerns on a project-wide basis for which Millennium has not included adequate mitigation. While we could include detailed site-specific mitigation measures, we believe there should be some flexibility for Millennium and the affected landowner to work out the details of the most appropriate site-specific mitigation and that these details should not be arbitrarily conditioned in a certificate that may not truly address the landowner's needs. However, we do reserve the right to review and approve the finalized plans to ensure that environmental concerns have been addressed. While we encourage the village to provide comments on the finalized site-specific plans, we note that, although the Commission encourages applicants to cooperate with state and local agencies, this does not mean that state and local agencies, through application of state or local laws, may prohibit or unreasonably delay the construction or operation of facilities approved by the Commission.

Comment Summary 3-4: An overwhelming number of commenters requested that the FERC extend the comment period beyond the 45-day comment period on the SDEIS that ends on April 25, 2001. This would allow consideration of the issues and concerns of Westchester County residents, including landowners with properties affected by the ConEd Offset/Taconic Parkway Alternative and residents in the City of Mount Vernon.

3-4 All comments received in a timely manner will be considered and all letters filed with the FERC are entered into the RIMS as part of the public record for this project. In our April 26, 2001 notification to landowners affected on the ConEd Offset/Taconic Parkway Alternative, we requested comments as soon as possible and within 30 days of the date of the notice. This effectively extended the public comment period for another 30 days to May 30, 2001. We conducted meetings in Westchester County in Yonkers on March 24, 1998, and March 18, 1999, on the DEIS; in Croton-on-Hudson on September 14, 2000, on the 9/9A Proposal; and then in Ossining on March 12, 2001, and in Mount Vernon on September 4, 2001, on the SDEIS . We have accepted and considered all comments on the project for as long as time will allow before the publication of the FEIS.

Comment Summary 3-5: After the SDEIS public comment meeting on April 9, 2001, the Village of Croton-on-Hudson submitted a request on May 22, 2001 to extend the comment period for 45 days to allow the village to analyze the impacts of the ConEd Offset/Taconic Parkway Alternative. Since the Commission never ruled on the village's request, the village was compelled to submit a set of preliminary comments on May 29, 2001, the deadline for public comments on the SDEIS. Since that time, the village has retained a consultant to prepare a technical report on the impacts of the pipeline on the village and submitted these supplemental comments on July 13, 2001.

3-5 Comment noted. We have reviewed all of the listed correspondence

Comment Summary 3-6: The comment period should be extended to July 31, 2001 to allow the City of Mount Vernon residents and local officials an opportunity to comment further on the project.

3-6 We have reviewed and responded to comment letters provided by the City of Mount Vernon on May 23, May 25, and July 18, 2001. We also conducted an additional public comment meeting in Mount Vernon on September 4, 2001.

Comment Summary 3-7: A site survey and public meeting in Mount Vernon should be conducted to hear concerns regarding the proposed route of the Millennium pipeline. There are concerns about the proposal through the densely populated neighborhoods in Mount Vernon and about the ConEd Offset/Taconic Parkway Alternative. Many New Yorkers feel their concerns have not been heard and the FERC should meet with the community to hear these concerns first hand. The region's energy needs can be met while fully protecting the environment and addressing the concerns of local communities.

3-7 Comment noted. Another public comment meeting occurred on September 4, 2001 in Mount Vernon

Comment Summary 3-8: Millennium/Columbia has not yet completed all of its studies for the new route (e.g., ConEd Offset/Taconic Parkway Alternative). Therefore, there will be no site-specific DEIS for this route. Even if more time is granted to comment, commenters may not be addressing issues which are relevant since they do not have enough information.

3-8 Comment noted. The environmental information for this route was filed by Millennium in April 2001 and is available at the FERC website on RIMS at www.ferc.gov. A complete environmental analysis of this route is also included in section 6.2.6.1 of this FEIS. Any minor outstanding surveys are in progress and will be completed before construction can occur, if the project is approved.

Comment Summary 3-9 : The SDEIS does not mention the ConEd Offset/Taconic State Parkway Alternative and limits its discussion to those engineering and construction issues raised by the PSCNY on the original proposed route. It does not address the offset nor was the alternative included in the August 9, 2000 scoping document that served as the basis for the SDEIS and the public hearing on the 9/9A Proposal. Moving the pipeline to the offset location on the ConEd right-of-way raises numerous environmental issues as well as the placement of the pipeline adjacent to the Taconic Parkway, although this is preferable to placement along State Route 100. These issues need to be addressed in a second SDEIS.

3-9 The SDEIS included an analysis of the ConEd Offset/State Route 100 Alternative and suggested that this alternative, if acceptable to the PSCNY, would help minimize impacts associated with the 9/9A Proposal. The modification to this alternative (the ConEd Offset/Taconic Parkway Alternative) has been developed in consultation with the PSCNY and has taken into account comments from abuttors along the ConEd right-of-way. Our analysis is in section 6.2.6 of the FEIS. We believe that all affected parties have had ample opportunity to comment on the alternative and that another SDEIS is not warranted.

Comment Summary 3-10: More time is needed to comment on the ConEd Offset/Taconic Parkway Alternative. This alternative will require clear cutting of a 75-foot-wide swath of mature growth along the ConEd property line that would eliminate visual barriers and protective screening of the overhead utility structures and gas line. The SDEIS did not take into account the extended offset as incorporated into the SMOU and stated that "detailed surveys are not available" for this alternative. When the proposed pipeline is within 25 feet of a residential property line, an aerial photograph with property lines superimposed at a scale of 1 inch = 200 feet is inadequate to determine impacts. The review process needs to allow abuttors sufficient time to review the alternative that directly impacts their property.

3-10 We have given abuttors 30 days to comment, which is the standard time frame allocated for review of any NOI issued for a proposed project (see section 1.3 of the EIS). However, we have also considered all timely comments received after that deadline and up to and through early September. As stated above, these comments are part of the public record. Since the publication of the SDEIS and the identification of the ConEd Offset/Taconic Parkway Alternative, Millennium has completed surveys of the ConEd right-of-way and those properties that would be affected by the alternative. These surveys are sufficient to determine impacts since they are at the same level as those completed for the rest of the project in New York where the pipeline would cross through private property, not just within 25 feet of residential properties. Please see additional discussion in section 6.2.6 for information on the alternatives and mitigation for impacts.

Comment Summary 3-11: A public hearing is required for the ConEd Offset/Taconic Parkway Alternative along with a new notice since the April 9, 2001 public hearing did not allow for comment on this route.

The ConEd Offset/Taconic Parkway Alternative was filed by the Village of Briarcliff Manor (representing the Villages of Briarcliff Manor, Croton-on-Hudson and Ossining, and the Town of Ossining) on March 28, 2001, and was the subject of a number of comments from individuals at the April 9, 2001 public comment meeting. We also visited the areas of primary concern with affected landowners and other interested parties on June 4 through 6, 2001. Our September 4, 2001 comment meeting provided another opportunity for oral comments on any aspect of the project. We do not believe that another public comment meeting is warranted.

Comment Summary 3-12: The comment period should be extended for 45 days to allow further comment on the proposed and alternative routes in Westchester County. While commenters do not want to impose the pipeline on neighbors along the 9/9A Proposal, commenters do want the opportunity to explore the impact of the proposed ConEd Offset/Taconic Parkway Alternative on the area. Further, many commenters only just received the SDEIS that was prepared to consider the 9/9A Proposal which the PSCNY now opposes. There is not sufficient time to review the SDEIS and provide comments by April 30, 2001. The project is being rushed without adequate time for people that are affected to comment.

3-12 See responses to comments above.

Comment Summary 3-13: Commenters have not been notified in a timely manner, specifically with regard to route changes such as the ConEd Offset/Taconic Parkway Alternative.

3-13 We have provided landowners and abuttors on the ConEd Offset/Taconic Parkway and State Route 100 Alternatives with 30 days to comment on the proposal. Since we have continued to review comments through September 2001, we believe that sufficient time has been provided to identify concerns that we should incorporate into our analysis.

Comment Summary 3-14: If a property owner is to be directly affected by an alternative route, then enough time should be provided for review of the proposal. It took 1 week to get a copy of the DEIS, which is as big as the Manhattan telephone directory, from Columbia since the FERC had no more copies. It is not fair or reasonable to allow only 1 week for review of this document. The FERC should have provided notice 2 years ago about the possibility of the pipeline being laid within or adjacent to the ConEd right-of-way.

3-14 We have made every effort to contact landowners affected by either the proposed route or any of the reasonable alternative routes as these alternatives have developed through the public comment process. Two years ago, abuttors to the ConEd right-of-way would not have been affected since all construction would have occurred within the ConEd-owned right-of-way.

Comment Summary 3-15: If the pipeline is placed along the ConEd Offset, a site-specific DEIS needs to be completed.

Our environmental analysis of the ConEd Offset/Taconic Parkway Alternative is included in section 6.2.6 of the FEIS. The analysis includes environmental information on the alternative as well as our conclusions from our field review conducted on June 4 through 6, 2001. See response to comment 3-8.

Comment Summary 3-16: There has been no formal written notification from FERC of any route for the pipeline adjacent to or on properties along the ConEd Offset/Taconic Parkway Alternative until Millennium/Columbia called for permission to allow surveyors near homes to stake out the route on the ConEd right-of-way. This was the first time anyone was contacted about a proposal to place the pipeline adjacent to properties.

We rely on the company to provide the initial list of affected property owners. As part of this notification process, we attempt to give public notification of the project through contacts with state, county, and local town officials, libraries, and newspapers. Attendance at the public meetings and comments from the public indicate that the project is common knowledge in the area.

Comment Summary 3-17: The members of The Greater Centennial African Methodist Episcopal Zion Church at 102 West Fourth Street, Mount Vernon have learned that the church would be within 50 feet of the proposed pipeline route. No correspondence, communication or notice has been received from the FERC or Millennium concerning the pipeline. Because of the lack of any prior notice, members have been denied the right to comment on the DEIS and support the motion by the City of Mount Vernon to extend the comment period to July 1, 2001, so that comments may be provided to the city which will summarize them for submittal to the FERC.

3-17 The pipeline would terminate at the corner of West 4th Street and South 7th Avenue, one block east of the church (see section 6.3.17). Since the pipeline would be installed in the streets of Mount Vernon and because of the number of abuttors along the city streets, information on the project has been provided to the City of Mount Vernon and in notices in the newspaper. Information about the project is also sent to individuals who have filed comments on the project. We have recommended that Millennnium work with representatives of the city and the community to resolve concerns regarding installation of the pipeline in the city streets.

Comment Summary 3-18: If the pipeline is constructed, a mailing should be sent to individuals in the community informing them of the construction schedule and a phone number or website should be provided so the community can receive information of the schedule and reports of construction violations. In addition, a traffic impact study should be made available to residents in affected communities.

3-18 See section 5.8.2.2 of the FEIS for Millennium's proposed procedures for in-street construction in Yonkers and Mount Vernon. These procedures include providing notice through local media to affected residents on the construction schedule, specific street closings (if needed), and other information 1 month before construction begins and on a daily basis during construction. We have also recommended that site-specific plans be developed for construction in the City of Mount Vernon.

To ensure that all complaints are resolved in a timely and efficient manner, we have recommended that Millennium develop and implement an environmental complaint resolution procedure that provides landowners/residents with clear and simple directions for identifying and resolving their problems/concerns during construction of the pipeline and restoration of the right-of-way. Millennium would mail the complaint procedures to each landowner/resident before construction is authorized to proceed (see section 5.8.1.1 of the EIS). The FERC also maintains an Enforcement Hotline at 877-303-4340.

A traffic study was prepared for the 9/9A Proposal where pipeline construction would affect one lane of traffic on U.S. 9 and State Route 9A, which are classified as urban principal arterial expressways or streets. Both these roads carry large volumes of traffic (see section 5.8.4 of the EIS). However, we do not believe a traffic study is warranted for city streets or where the pipeline would be bored under a roadway or open cut. Boring under roads would have no impact on traffic. An open cut of a road would only be done for minor roads (primarily driveways) and disruption to traffic would be minor and completed in 1 to 3 days. For city streets, only one block would be affected at a time and alternate traffic routes would be available on adjacent streets.

Comment Summary 3-19: In the original application filed by Millennium, there is mention of privileged environmental information. No information should be considered privileged and this information should be released to the public.

3-19 To protect federally endangered and threatened species and cultural resources, we ask that project applicants not publically disclose the location of these sensitive resources. All materials containing the location, character, and/or ownership information about these resources are treated as privileged information.

4. GEOLOGY AND BLASTING (C5, C13, C14, O12, O18, O20, Various WC)

Comment Summary 4-1: The pipeline would cross the Ramapo fault. A few years ago, there was an earthquake strong enough to crack foundations in Croton, Westchester County. What assurance is there that the pipeline can handle an earthquake?

4-1 As stated in section 5.1.1, the mainshock of the 1985 Ardsley earthquake had a magnitude of about 4. Underground pipelines could be damaged in an event with a magnitude of about 6, and would certainly be damaged in the highest level event of 7.75. Also, see section 4.1.3 of the EIS.

Comment Summary 4-2: The Village of Croton-on-Hudson and private landowners along the ConEd right-of-way are concerned that construction of the pipeline along the ConEd Offset/Taconic Parkway Alternative (particularly blasting operations) may cause serious damage to water wells, residences, structures, and trails, and may destabilize the local geology and increase the risk of erosion and landslides. Because of these known risks, the village enacted a Steep Slopes Law in 1989 which provides that "new construction shall avoid areas that contain steep slopes ... and existing vegetation in such areas shall not be disturbed" (Croton-on-Hudson, New York, Local Law No. 6 of 1989, §195-1(B)).

4-2 We believe the pipeline can be installed safely without long-term impact on wells, residences, etc. Millennium is required to stabilize and restore the right-of-way after construction, and to maintain the right-of-way during operation of the pipeline. Further, although the Commission encourages cooperation between interstate

pipelines and local authorities, this does not mean that state and local agencies, through applications of state or local laws, may prohibit or unreasonably delay the construction or operation of the pipeline.

Comment Summary 4-3: The areas in Westchester County are rocky. It has been deemed unwise to put in sewer lines because of the extensive amount of blasting necessary. What makes it wise to lay a 6-foot deep trench for miles on end, leveling hillsides first to achieve the right grade?

4-3 Millennium has stated that blasting would be used as a last resort and that it would use appropriate mitigation (e.g., using minimal charges sized to fracture rock not remove it, using mats over blast sites to ensure that no material becomes airborne, and conducting pre- and post-blast structural inspections of residential structures, septic systems, and storage tanks). No hillsides would be leveled, other than that which is necessary to provide an approximate 75-foot-wide corridor for construction. "Tiered" construction may be needed to provide a safe work surface for construction equipment by provided side-to-side stability. This corridor would be restored to pre-construction contours as closely as possible once the pipeline has been installed.

Comment Summary 4-4: Placing the pipeline so near to homes could cause damage to septic systems, underground oil tanks, foundations, walls, ceilings, windows, floors, etc. The Town of Cortland engineer indicated that placing a pipeline so close to homes was ludicrous.

4-4 Comment noted. There should be minimal impacts on foundation walls, ceilings, windows, floors, etc. from installation of the pipeline, even if blasting is required near homes. If blasting is required, Millennium states that blasting would only be conducted during daylight hours and in accordance with all existing ConEd requirements. Blasting would be conducted with minimal charges that are sized and located to merely fracture the rock not remove it. Rock removal would be accomplished with a backhoe or other mechanical means. Additionally, all blasts would be covered with mats to ensure that no material becomes airborne. Millennium would also conduct pre- and post-blasting inspections of structures, including septic systems and storage tanks, within 150 feet, with the landowner's permission (see section 5.1.1 of the EIS). In general, the ConEd Offset Alternative would require placing the pipeline within the ConEd right-of-way, which should avoid all septic systems or underground oil tanks since these are typically located within the residential property. However, Millennium states that it would attempt to avoid all septic systems (see section 5.8.2 of the EIS).

Comment Summary 4-: Blasting and pipeline construction will destroy all the hard work and equity put into homes adjacent to the pipeline. Receiving a week's notice and then another notice on the day that blasting would take place is not mitigation.

4-5 Comment noted. We recognize that pipeline construction will be disruptive and that vegetative clearing will result in visual impacts on residences adjacent to the construction right-of-way. Since the need for blasting is difficult to predict with certainty until construction begins, we believe it is important to provide notification to landowners once it is determined where blasting needs to be done.

Comment Summary 4-6: The pipeline would cross over the Ramapo fault and the potential for an earthquake, although remote, cannot be dismissed.

4-6 As stated in section 5.1.1 of the EIS, no surficial displacement has occurred along the Ramapo fault during the last 10,000 years. The 1985 Ardsley earthquake had a magnitude of about 4, well below that which could damage the pipeline (e.g., a magnitude of between 6 and 7.75).

Comment Summary 4-7: Can Millennium/Columbia, or some other company, be allowed to blast near or on our property?

4-7 Blasting will be allowed where it is deemed necessary to install the pipeline. All blasting will be done in conformance with applicable state and municipal regulations. See section 5.1.1 of the EIS.

5. SOILS AND EROSION (S8, O12, Various WC)

Comment Summary 5-1: Figure 15 (Typical Topsoil Conservation in Agricultural Land) of Millennium's ECS is accurate to the extent of its respective descriptions, however, the labeling and/or footnoting of Figure 15 should be clarified to avoid reviewer interpretation and field error.

5- Comment noted. See section 5.2.2 of the FEIS

Comment Summary 5-2: The NYSDA&M agrees with the general information presented in the SDEIS concerning the prevention and/or rectification of impacts to the shallow groundwater resource that the majority of the affected Amish farms depend on for domestic use, livestock, milk cooling facilities and ice pond/ice house facilities. However, table 2.2.1-1 of the SDEIS should be supplemented to include clarifications on 7 properties (parcels 03C21, 03C23, 03C24, 03C25, 03C26, 03C33/03C34, and 03C42).

5-2 Comment noted. See table 5.3.1-1 of the FEIS.

Comment Summary 5-3: The NYSDA&M has reviewed and agrees with the incorporation of the Moore and Larison Variations since they would avoid permanent impact on maple sugar bush stands. In addition, the NYSDA&M recommends two other route variations. One is at an Amish farm (parcel 03C17) at MP 74.05 and should be incorporated to avoid construction through the farm's best crop field. The second is in the general vicinity of MP 97.5 and would minimize impact on maple sugar bush operations. In a followup comment, the NYSDA&M identified the route realignment between MPs 97.9 and 98.8, known as the Sugarbush Reroute, Fay Hollow/Snow Brook Road (Drawing Number 8525-GIS-5374.

5-3 Comment noted. See section 5.2.2 of the FEIS for our recommendation on the Amish farm (parcel 03C17). Regarding the second variation beginning at MP 97.9, we believe this is a minor realignment of the pipeline within the landowner's property that can be incorporated into the proposed route (see recommendation 5 in section 7.2 of the FEIS).

Comment Summary 5-5: The pipeline would pass through wooded neighborhoods in Westchester County where builders are required to comply with strict laws regulating building, cutting of trees, and disruption of steep slopes so as to protect the environment and homeowners from excesses that have caused a degradation of the environment in years past.

5-5 The pipeline will be below ground and, once installed and the right-of-way revegetated. The right-of-way grade would be restored as much as practical.

Comment Summary 5-6: The pipeline would be extremely close to homes that abut the ConEd right-of-way. Installation of the pipeline would dig up the back hill that is more than 45-degree angle, and cause erosion and land slides in heavy rains. Boulders did roll down during past work done on the right-of-way by ConEd.

5-6 Millennium would be responsible for installing the pipeline using the erosion controls and restoration measures specified in its ECS.

6. GROUNDWATER AND PUBLIC WATER SUPPLIES (S5, C13, C14, C15, C17, O14, Various WC)

Comment Summary 6-1: The pipeline will cross 12 counties in New York. Other than Westchester County, there is no mention in the SDEIS of consultation with county health officials regarding water supplies or other health department regulated facilities that may be impacted by the pipeline or its construction. Please send the SDEIS and future documents to the local health departments included with this letter.

6-1 Comment noted. The SDEIS focused primarily on the 9/9A Proposal and certain aspects of the entire project. It did not include detailed information on the pipeline crossings of other counties in the state. Millennium has contacted all towns that would be crossed by the pipeline regarding protected aquifers and water supply watersheds (see section 5.3.1 of the FEIS). Each county office has received at least one copy of the DEIS, SDEIS, and FEIS. We have added your attached list to our mailing list for the FEIS.

Comment Summary 6-2: The SDEIS incorrectly states that the Grassy Sprain Reservoir is no longer a source of drinking water for the City of Yonkers. Although it is not a primary source, this reservoir continues to be an emergency source for the city and the special measures planned for pipeline crossing of public water supplies should be implemented during construction in the Grassy Sprain Reservoir watershed.

6-2 Comment noted. The FEIS has been amended. We have recommended that Millennium identify aquifer protection districts and watersheds on its CAS and that it implement additional precautions when constructing through these areas (see section 5.3.1 of the FEIS). This would include the Grassy Sprain Reservoir watershed.

Comment Summary 6-3: Pipeline construction will temporarily dislocate waterfowl along the 9/9A Proposal through Westchester County and also in Haverstraw Bay. There is no discussion of possible relocation of waterfowl to the City

of New York reservoirs where bacteriological contamination could be a concern. City officials should be notified if and when large flocks of waterfowl are displaced.

6-3 Waterfowl concentration areas occur along the Hudson River/Haverstraw Bay and Croton River. Millennium states that it would coordinate with the FWS, NYSDEC, and other appropriate agencies regarding mitigation measures including restrictions on time-windows for construction during off-peak migration within these areas. For this reason, we do not anticipate that large flocks would be displaced.

Comment Summary 6-4: The Village of Croton-on-Hudson obtains its water from a shallow valley-fill aquifer located in the Croton River gorge. The ConEd Offset/Taconic Parkway Alternative would cross through the middle of the village's designated "Zone I" wellhead protection area where the municipal water wells are located. Millennium proposes to dewater its trench during construction and may use this water for hydrostatic testing. Because the groundwater is shallow in this area, trench dewatering could require pumping of significant amounts of groundwater causing a decline in the water table. The crossing could also affect subsurface hydrogeology since hydrogeologic studies of the wellfield have documented that there is a hydraulic connection between the aquifer and the Croton River.

6-4 We have included a recommendation to restrict construction through the aquifer protection area to the dry season. Consequently, we expect that the water table would be low enough to limit the amount of water in the trench that may be potentially affected by dewatering. In addition, dewatering of the trench, if needed, would be conducted for a limited period of time. Water pumped from the trench would be discharged into well vegetated areas and allowed to return to the aquifer through infiltration. Any lowering of the water table would thus be temporary. If blasting is required, blasting could cause previously sealed fractures to be opened, creating a new path for surface water migration into the aquifer. If any changes in the water table elevation were to occur as a result of this, only the immediate area of the pipeline right-of-way would be temporarily affected until the water table was re-established. See section 5.3.1.1 of the FEIS.

Comment Summary 6-5: Operation of the construction equipment and storage of various substances associated with the use of such equipment on the ConEd Offset/Taconic Parkway Alternative may contaminate the Village of Croton-on-Hudson's water supply. Contaminant releases can occur during refueling, as a result of equipment failure, or through the use of methanol for hydrostatic testing of the pipeline. Since the soils are very permeable, these contaminants would be expected to migrate quickly from the surface directly into the water table and water supply.

6-5 In accordance with Millennium's ECS and our Procedures, all fuel storage areas would be located at least 100 feet from streams, at least 200 feet from active private water wells, and at least 400 feet from municipal water wells. Use of hazardous materials for vehicle maintenance would follow the same requirements. In addition, all equipment would be inspected daily for leaks before beginning work in aquifer protection areas (see section V of the Millennium's ECS). Millennium states that methanol may be injected, after discharging the water, to dry the pipe and that any excess methanol would be collected and disposed of in accordance with applicable state and local regulations.

Comment Summary 6-6: The continued presence of the ConEd Offset/Taconic Parkway Alternative pipeline in the Village of Croton-on-Hudson's wellfield would present an ongoing risk to the village's water quality. A pipeline leak would introduce contaminants into the groundwater. Natural gas can dissolve in and be transported by groundwater. Furthermore, hydrocarbon condensates are known to form in gas pipelines and these condensates will cause groundwater contamination if a leak occurs.

6-6 Natural gas is immiscible in water and is lighter than air. Therefore, leaking gas near the ground surface would rise through soils and water and disperse into the atmosphere. In the unlikely event of a pipeline failure, appropriate cleanup measures would be employed to restore the surrounding disturbed area.

Comment Summary 6-7: The ConEd Offset/Taconic Parkway Alternative would cross the area identified by the Village of Croton-on-Hudson as appropriate for the development of additional water wells in the future. Because of restrictions on drilling in the vicinity of natural gas pipelines, the pipeline reduces the available area to meet future water supply needs.

6-7 The pipeline would be operated and maintained within a 50-foot-wide right-of-way, and would cross 1.5 miles of this aquifer. There should be adequate area available to drill additional wells without impact on the pipeline. In addition, Millennium states that it would bury its pipeline with 8 feet of cover to prevent interference with possible future water lines through this area. We believe that the pipeline would have minimal impact on the development of future water supply facilities for Croton-on-Hudson.

Comment Summary 6-8: The Croton Aquifer has not been adequately addressed. It is the primary source of water for Croton, how the Croton River will be crossed safely, and the impact on those who rely on these sources for water (i.e., the community outside of the municipal water system who depend on individual wells) have not been adequately addressed. Also, the potential impact of construction through the New Croton Reservoir watershed between MPs 396.6 and 399.7 has not been adequately addressed.

6-8 See section 5.3.1.2 of this EIS for a discussion on protection of groundwater resources (e.g. aquifers and private water wells). Also see discussion in section 6.2.6.1.

7. AQUEDUCTS (Including the Catskill Aqueduct) (F1, S5, S7, S14, C9, C17)

Comment Summary 7-1: The NYCDEP has expressed concern about failure of the pipeline and interruption of water supplied via the Catskill Aqueduct. The 9/9A Proposal no longer closely parallels the aqueduct but would cross it in Yonkers, New York, where the top of the aqueduct has only 8 feet of cover. Continued coordination with the NYCDEP is needed to ensure that the crossing is designed and constructed in a manner which is most protective of this very critical section of New York City's public works infrastructure. We concur with FERC's recommendation that an independent engineering analyses of the crossing plan be prepared.

7-1 Thank you for your comment.

Comment Summary 7-2: The pipeline will cross the NYCDEP's New Croton Aqueduct at three locations with aqueduct depths ranging from 40 to 140 feet. Although the SDEIS discusses a SPCC plan, it does not consider fuel depots and fueling sites as a potential threat to the New Croton Aqueduct. Measures should be taken to protect this aqueduct from fuel spills that may occur during pipeline construction.

7-2 Millennium's Spill Prevention, Containment, and Control Plan (SPCC Plan), which is included in its ECS in appendix E1, addresses how Millennium would contain and cleanup inadvertent spills. Millennium's SPCC Plan outlines protective measures to minimize the possibility of a spill and the response measures to be followed in the event of a spill or leak. These measures include designation of fuel and hazardous materials storage areas, containment requirements for fuel depots, minimum setback distances from natural resource areas for specified refueling and maintenance activities, clean up materials that need to be on site, and spill reporting procedures. In those aquifer protection districts that have specific requirements, Millennium would follow the district-specific procedures, which include prohibitions on refueling in specially designated areas, construction of silt fences and booms, or specification of the types of sorbent materials that should be available.

Comment Summary 7-3: The pipeline will also cross the NYCDEP's Catskill Aqueduct with aqueduct depths 8 feet below the ground. Commenter supports the NYCDEP's request for an independent engineering analysis.

Comment noted. In section 5.3.5 of the FEIS we have recommended that Millennium provide us with the results of its independent engineering assessment of its proposed crossing plan of the Catskill Aqueduct at MP 418.2 and any comments from the NYCDEP on the plan. The final Catskill Aqueduct crossing would be filed with the Secretary for review and written approval of the Director of OEP.

Comment Summary 7-4: The 9/9A Proposal would cross the Old Croton Aqueduct and Old Croton Aqueduct Park at MP 397.4. The SDEIS fails to mention that the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) are the property owners and administrators.

7-4 Comment noted. Sections 4.3.2 and 5.3.2 of the FEIS have been corrected.

Comment Summary 7-5: The recommendation section beginning on page 7-7 of the SDEIS does not mention that Millennium should continue to consult with the NYSOPRHP regarding the crossing of the Old Croton Aqueduct, nor does it mention that the SHPO should be consulted regarding cultural resource issues. There are requirements for other plans in the SDEIS and there should be a requirement for a site-specific crossing plan for the Old Croton Aqueduct and state park properties.

7-5 The Old Croton Aqueduct State Park is listed on table 5.8.3.2-1. We have recommended that Millennium file with the Secretary all mitigation plans for construction and restoration across the properties listed on this table for review and written approval by the Director of OEP. In addition, the Old Croton Aqueduct is included on table 5.9.2-1 as a listed NRHP site and National Historic Landmark for which the pipeline crossing is not finalized. For any listed or potentially eligible cultural resource site, we have recommended that Millennium file with the Secretary for review and approval of the Director of OEP all additional cultural resource surveys,

evaluation reports, and mitigation plans before construction can begin. Both these recommendations include consultation with the owner/manager of these properties.

Comment Summary 7-6: The SDEIS requires a contingency plan for the crossing of the Croton River in the event that the proposed directional drill fails. Since this crossing is about 300 feet before the crossing of the Old Croton Aqueduct, the NYSOPRHP would appreciate consultation and notification of any construction changes regarding the crossing of the Croton River to assess potential impacts to the Old Croton Aqueduct.

7-6 According to our calculations, the crossing of the Croton River on the 9/9A Proposal is about 2,500 feet (0.5 mile) from the Old Croton Aqueduct. Neither the directional drill nor an open cut should have any effect on the aqueduct.

Comment Summary 7-7: The NYCDEP is responsible for the protection of the New York City Watershed, providing water to 9 million New York State residents, and protecting the water supply aqueducts. One essential component of the water supply system is the Catskill Aqueduct that supplies water to dozens of upstate communities and transports approximately 40 percent of the 1.3 billion gallons of water consumed in New York City each day. The pipeline currently crosses the Catskill Aqueduct at one of its most vulnerable locations: the Bryn Mawr siphon. The NYCDEP appreciates the FERC's recognition of this utility and the decision regarding the rerouting of the pipeline along the 9/9A Proposal that eliminates the 1.9-mile-long section which paralleled the aqueduct.

7-7 Thank you for your comment.

Comment Summary 7-8: Since the publication of the SDEIS, the NYCDEP has become aware of the ConEd Offset/Taconic Parkway Alternative. The NYCDEP requests details of this alternative and that an SDEIS be issued on the route to allow review and comment.

7-8 The ConEd Offset/Taconic Parkway Alternative would replace the segment of the 9/9A Proposal between approximate MPs 391.9 and 404.5. This alternative would also avoid the 1.9-mile-long segment in New Castle where the original route was adjacent to the Catskill Aqueduct. Millennium and the PSCNY have signed a SMOU that addresses pipeline design and operation along this route and other locations in Westchester County. We issued a notice concerning this alternative on April 26, 2001. Section 6.2.6 of the FEIS contains a detailed analysis of this alternative.

Comment Summary 7-9: Although the SDEIS addressed some of the NYCDEP's concerns, the SDEIS neither addressed nor acknowledged the potentially catastrophic impacts of a gas pipeline explosion on the delivery of water to the City of New York and communities north of the city. In order to take a hard look at the possible consequences from an aqueduct rupture, there needs to be a thorough investigation into the potential impacts. A rupture would result in a loss of water and water pressure thereby posing an immediate threat to human health, creating severe problems in sanitation, inhibiting the ability to adequately fight fires, and causing localized flooding. These impacts are as significant as those identified with use of the ConEd right-of-way.

7-9 While we did not specifically list or analyze the potential effects of a pipeline rupture at the crossing of the Catskill Aqueduct, we believe we properly identified the concerns and provided the basis for resolving these concerns. However, we have included your identified consequences in our discussion of the Catskill Aqueduct in section 5.3.5.

Comment Summary 7-10: The SDEIS does not include information sufficient to review other potential route alternatives in the area of the Bryn Mawr Siphon. To date, the numerous alternatives submitted by both the NYCDEP and Millennium have only received cursory environmental review in the NEPA process. Claims that these alternative crossings are not feasible are not substantiated.

7-10 To date, we are aware of only one alternative to the proposed crossing of the Catskill Aqueduct: at approximate MP 418.2 as proposed by the NYCDEP (Catskill Aqueduct Variation). As stated in the SDEIS, use of residential streets is strongly opposed by the City of Yonkers and its residents.

Comment Summary 7-11: The SDEIS correctly acknowledges that there is insufficient information available to determine the feasibility of a crossing at the Bryn Mawr Siphon. The cursory information provided to date fails to provide a sufficient basis by which risks could be determined and a possible crossing could be approved. Millennium has only provided a generic concept drawing invoking the general concepts of an aqueduct crossing. Absent are design specifics or calculations and analyses required to demonstrate how the suggested concept would provide protection from an explosion.

7-11 In the SDEIS and in response to the NYCDEP's comments, we recommended that Millennium implement its offer to hire a consultant acceptable to the NYCDEP who would provide a detailed design plan for the Catskill Aqueduct crossing in view of the NYCDEP's concerns. Millennium provided the NYCDEP with a draft RFP in November 2000. We believe that until the NYCDEP allows Millennium to conduct a site study of the crossing, conduct engineering analyses of its proposed conceptual plan, finalize the site-specific crossing plan, and then hire an acceptable consultant to review this plan to address the NYCDEP's issues, there can be no resolution of its concerns nor the development of an acceptable crossing plan.

Comment Summary 7-12: Due to the timing of the SDEIS in March 2001, updated information is available regarding the proposed design. The SDEIS implies that the pipeline would be placed in the roadbed of the Sprain Brook Parkway and that the crossing would take place within the roadbed. However, conversations with Millennium in January 2001 suggest that this is not the case. Any design and review for crossing of the aqueduct must be subject to concurrence by the NYCDEP and its independent consultant, and should be in advance of a decision by the FERC regarding the location, environmental impact, and feasibility of an aqueduct crossing.

7-12 Our recommendation in the SDEIS states that Millennium shall file the results of the independent consultant along with the NYCDEP's comments before construction across the Catskill Aqueduct.

Comment Summary 7-13: In November 2000, the NYCDEP agreed to consider the crossing upon receipt of more detailed information on the design. Millennium and the NYCDEP are in agreement that Millennium would design the crossing and subsequently hire a third party selected by the NYCDEP to conduct an independent review of the crossing. In January 2001, Millennium and the NYCDEP discussed the possibility of moving the aqueduct crossing outside of the Sprain Brook Parkway roadbed. In addition, the NYCDEP notified Millennium of the process for obtaining the permit needed for site access that is required in advance of the site investigation work for the design.

We support allowing Millennium access to the site to allow completion of a detailed, site-specific design.

Comment Summary 7-14: The SDEIS acknowledges that despite the low probability of a gas explosion along the ConEd right-of-way, the potential consequences would be catastrophic. Following further analysis, a new pipeline route was proposed and subsequently recommended by the FERC. The NYCDEP cannot stress too strongly that its concerns regarding an explosion or similar catastrophe are no less compelling. The assessment and elimination of all possible risks is crucial, as well as the NYCDEP's concurrence with the eventual design and analysis.

Comment noted.

Comment Summary 7-15: Despite the benefits to public safety that stem from the ConEd Offset/Taconic Parkway Alternative, the NYCDEP is concerned about the lack of notification from the FERC in announcing the alternative. Although the alternative is similar in nature to previous alternatives, variations in aqueduct depth require that every potential crossing be evaluated. The NYCDEP made a specific request for information on the ConEd Offset/Taconic Parkway Alternative in its earlier letter, but was informed that FERC staff did not notify the NYCDEP because it is not listed as an adjacent landowner. As an intervenor, the NYCDEP takes exception to this characterization and requests notification of any proposed route alternative.

7-15 Comment noted.

8. WATERBODIES AND FISHERIES (F3, C9, C13, C14, O6, O10, O14)

Comment Summary 8-1: The DOI supports the measures described in the SDEIS to site the project adjacent to existing rights-of-way to reduce impacts to wetlands and waterbodies to the extent practicable. In addition, as described in the DOI's April 28, 2001 letter to the COE, cross-sectional and longitudinal profiles of Class AA, A, B, and C streams should be surveyed prior to construction. This would allow restoration of pre-construction meander geometry and radius of curvature as well as key streambed features such as the position of the thalweg; bank shape, slope and position; and depositional bars to be restored, thus reducing the potential for headcutting or downstream scour following construction. During restoration, the native bank and bed material should be replaced.

8. There are 78 waterbodies that are classified as AA (1), A (18), and B (59), or approximately 15 percent of the total waterbodies crossed by the proposed project. Construction across and restoration of these waterbodies would be in accordance with Millennium's ECS, our Procedures, and the NYSDEC section 401 Water Quality Certificate. This includes the replacement of native streambed and bank materials that were excavated for installation of the pipeline. Preconstruction streambed contours and banks would be restored as closely as possible to preconstruction conditions.

Comment Summary 8-2: Because species such as the largemouth and smallmouth bass spawn in late spring and early summer, all in-water work in waterbodies supporting warmwater fish should be completed between June 30 and November 30, rather than June 1 and November 30.

8-2 The NYSDEC has issued its Section 401 Water Quality Certificate for the Millennium Project (see appendix K of the FEIS). Specification for construction windows for each waterbody crossed by the pipeline were developed in consultation with the NYSDEC (see appendix H1 of the FEIS). We concur with the NYSDEC determinations.

Comment Summary 8-3: Millennium has agreed to modify the timing and/or methodology of several streams that support, or are likely to support, Federal species of concern, including the bean villosa, yellow lamp mussel, and green floater.

8-3 Thank you for your comment. Section 5.6 has been modified to include the recommendations made for these species at Cassadaga, Olean, and Catatonk Creeks.

Comment Summary 8-4: Stream and wetland crossings within the Upper Delaware Scenic and Recreational River watershed and the impact on the water quality of these crossings remains a concern. Although these issues have been addressed in the SDEIS, they are still a major concern.

8-4 Comment noted. However, Millennium proposes to cross most streams using dry crossing techniques to minimize in-stream construction and related impacts. The only crossings still proposed for open cut within the Delaware River watershed are the Mongaup River (Rio Reservoir) and a portion of the East Branch Delaware River. Millennium will also schedule waterbody construction activities so that no more than one perennial tributary to any stream would be crossed at the same time. With these changes, we believe that impacts on water quality within the Delaware River watershed would be minimized.

Comment Summary 8-5: What impacts will occur to the ecology of the waterbodies when large volumes of water are removed from and/or discharged into the tributaries of the Upper Delaware River?

8-5 Our Procedures and Millennium's ECS require that hydrostatic test water withdrawal rates be below that needed to maintain and protect aquatic life, and provide for all other downstream waterbody uses. Further, Millennium would need to obtain permits for source and discharge of hydrostatic test water, which would provide an opportunity for the stipulation of additional conditions by the approving state agencies.

Comment Summary 8-6: Based on the MOU in the SDEIS, should safeguards, such as "Increased Wall Thickness" and "Automatic/Remotely Controlled Valves," be considered in other sensitive areas such as populated areas and significant waterbody crossings?

8-6 The pipeline would be designed and tested to operate safely at the proposed design pressure in accordance with USDOT specifications. The MOU in the SDEIS was developed between Millennium and the PSCNY to address the specific issues associated with construction within 1,500 feet of the ConEd right-of-way. Table 5.12.1-1 of the FEIS identifies locations where Millennium proposes to use Class 3 or 4 pipe or to upgrade the pipe class beyond those specified by the USDOT, including residential areas. We do not believe that additional safety considerations are warranted for significant waterbody crossings.

Comment Summary 8-7: In Part II, Table 2.2.2-4 on page 2-12 of the SDEIS, the energy company "Southern Energy' is now called "Mirant".

8-7 Table 5.3.2.3-3 has been revised.

Comment Summary 8-8: Part II of the SDEIS mentions contingency plans for major waterbody crossings that are proposed for a conventional bore or directional drill. Where will these contingency plans be filed and are they available for public review?

8-8 These would be filed if the bore or directional drill fails. The completed contingency plans (as recommended in section 5.3.2.3 of the FEIS) are filed with the FERC and become part of the public record. They would be available on RIMS at the FERC website www.ferc.gov. However, the large construction drawings may be too large for viewing on RIMS and may need to be obtained directly from Millennium.

Comment Summary 8-9: The SDEIS mentions that a third party inspector will report directly to the NYSDEC as specified in the NYSDEC Section 401 Water Quality Certificate. The Upper Delaware Council requests that a weekly proposed work schedule be submitted to the Upper Delaware Council and the appropriate state and federal agencies, including the National Park Service, which are responsible for the oversight and enforcement of such activities.

8-9 This would need to be worked out between the Upper Delaware Council and Millennium or the NYSDEC

Comment Summary 8-10: The endangered dwarf wedge mussel was discovered during the summer 2000. The FERC should determine whether development of a rare, threatened, and endangered management plan is needed for the stream crossings of the Upper Delaware River watershed. Further, monitoring should be done to determine the presence of endangered and threatened species within the Upper Delaware River watershed.

8-10 See section 5.6.3 of the FEIS for proposed mitigation for the dwarf wedge mussel. Millennium has completed surveys for the dwarf wedge mussel in the West and East Branches Delaware River in response to comments from the FWS. None were found. Millennium submitted this survey information to the FWS and on Juuly 17, 2001, the FWS responded that the survey was adequate and the proposed project was unlikely to adversely affect the dwarf wedge mussel or its habitat.

Comment Summary 8-11: On the 9/9A Proposal, the Croton River would be crossed using a horizontal directional drill. The Village of Croton-on-Hudson requests that the Commission follow the NMFS's recommendation (March 22, 2001) that a study of local geology be conducted in any area where directional drilling is being considered for use to determine the suitability of the area for this method. Specifically, the NMFS was concerned about determining if local geology was susceptible to fractures or instabilities that could complicate directional drilling. If directional drilling is not planned or feasible, alternative routes should be considered to avoid the Croton River area.

8- As stated in section 5.3.2 of the SDEIS, Millennium completed geotechnical investigations and an engineering evaluation of the feasibility of a directional drill of the Croton River on the 9/9A Proposal. Based on the results of this evaluation, Millennium proposes to directionally drill the river at this location.

Comment Summary 8-12: The ConEd Offset/Taconic Parkway Alternative would cross the Croton River upstream of the 9/9A Proposal's Croton River crossing. Rather than a directional drill as proposed for the crossing on the 9/9A Proposal, Millennium plans to dam and pump the crossing on the alternative. This crossing should also be directionally drilled.

8-12 Millennium states that directional drilling is not feasible due to the steep and rocky slopes in the area of the crossing. In accordance with the NYSDEC's Section 401 Water Quality Certificate, Millennium would be required to comply with stringent water quality standards for the dam and pump crossing of the Croton River.

Comment Summary 8-13: The ConEd Offset/Taconic Parkway Alternative would cross the Croton River within the Croton River Gorge, an area characterized by steep slopes and fast-moving water located immediately upstream of the portions of the river designated as the "Croton River and Bay Significant Coastal Fish and Wildlife Habitat" and EFH. This crossing must be scrutinized because of the area itself and the designated habitat downstream .

8-13 Millennium proposes to cross the Croton River on the alternative route using a dry crossing construction technique (e.g., dam and pump) (see section 6.2.6 of the FEIS). This would minimize impact on downstream uses and habitat. Also, we included a recommendation that this waterbody crossing be completed during the historical low flow period.

Comment Summary 8-14: Heavy rainfall and flooding during or after construction activities at the Croton River gorge crossing on the ConEd Offset/Taconic Parkway Alternative could lead to severe erosion, releasing large quantities of silt and sediment into the downstream portions of the Croton River and bay designated habitat. The Croton River gorge area becomes completely flooded on a regular basis. Local USGS gauging station data indicate that in the 1990s, there were over 90 times when the measured streamflow increased between 2 and 10 times in magnitude in the course of a day. Flooding could also wipe out any revegetation, tree replanting, or other restoration work after construction.

8-14 Comment noted. Millennium would be required to install erosion control devices on the right-of-way immediately after clearing and to ensure revegetation of the right-of-way after construction. While flooding could release additional sediment downstream, the designated habitat is well over 1 river mile downstream of the proposed crossing in Croton River gorge thereby limiting the potential for significant adverse impact on this habitat. In accordance with the conditions of the NYSDEC section 401 water quality certificate, construction across waterbodies would not be started if there is a 40 percent or greater chance of more than 0.1 inch of

precipitation predicted by the National Weather Service for the area for the expected period of in-stream construction (see appendix K). Further, the crossing would be completed during a low flow period (see response to comment 8-13)

9. HUDSON RIVER (F F2, F3, S2, C9, C13, C14, O6)

Comment Summary 9-1: The FEIS should evaluate thorough precautions to minimize resuspension and drift of contaminated sediments during trench construction in the Hudson River/Haverstraw Bay and that it present an analysis of alternatives for disposal of the excavated material, including the measures needed to secure an appropriate disposal location. An available alternative disposal method and/or site for any dredged material that is determined to be unsuitable for reuse as fill over the pipe must be identified.

9-1 As stated in section 5.3.4, there is no evidence of the presence of significant amounts of contaminated sediments along the proposed route across the Hudson River. See table 3 in appendix J (Millennium's Coastal Zone Management Policy Consistency Determination) and the NYSDEC 401 Water Quality Certificate. Based on modeling performed for the proposed closed-bucket dredging, we do not believe that the slightly elevated contaminant levels that might be encountered at the crossing location warrant removal of the excavated material to a disposal site.

Comment Summary 9-2: Based on the analysis in the SDEIS, the construction method for crossing the Hudson River, closed-bucket dredging, is preferable to the originally-proposed conventional bottom pull dredging method. However, there is no "consensus view" on the appropriate "window" during which dredging could be accomplished without causing significant harm to species and ecological functions of Haverstraw Bay. If the resource agencies do not concur with the SDEIS's proposed construction window, the FERC should conduct additional consultation with these agencies to reach an agreement before the FEIS is issued.

9-2 Thank you for your comment. A concensus has been reached for a dredging window between September 1 and November 15 (see section 5.3.4 of the FEIS).

Comment Summary 9-3: By far the most significant "gap" in the environmental impact assessment performed to date is the failure to adequately address the issue of PCBs in the Hudson River. This issue is not fully reflected in the public record which has become skewed by the issuance of the NYSDEC Section 401 Water Quality Certificate and a highly misleading depiction of sediment conditions by Millennium. The EPA's 1999 assessment of the Lower Hudson River concluded that "PCB concentrations in water and sediments in the Lower Hudson River generally exceed standards, criteria and guidelines established to be protective of the environment. Animals that use areas along the Lower Hudson designated as significant habitats may be adversely affected by the PCBs." [1/]

9-3 As stated in section 4.3.4 of the EIS, 200 miles of the Hudson River (including Haverstraw Bay) was placed on the Superfund National Priority Site List. This listing is not based on site-specific sampling in the project area.

Comment Summary 9-4: The proposed crossing of Haverstraw Bay is unprecedented. The Village of Croton-on-Hudson does not dispute that maintenance dredging of the existing navigation channel in the Hudson River is conducted on a regular basis, or that U.S. Gypsum (a facility on the western shore of Haverstraw Bay) also conducts maintenance dredging of a spur channel linking the facility to the main navigation channel. However, this dredging is very different from dredging in previously untouched parts of Haverstraw Bay for a new development. The channels are deep-water channels that are on the west side of Haverstraw Bay and therefore have less impact on the endangered shortnose sturgeon which tend to inhabit the eastern portion of the bay. Unlike the navigation channel dredging, the pipeline would be trenched laterally across the entire bay, disturbing more ecologically sensitive and previously untouched portions of the bay along the east shore, resuspending long-settled sediments, and then backfilling the trench with the same potentially contaminated sediments.

9-4 Comment noted. However, we note that installation of the pipeline would be a one-time temporary disturbance. The magnitude of this disturbance was adequately presented in the SDEIS and again in the FEIS.

Comment Summary 9-5: Riverkeeper is a New York not-for-profit environmental organization dedicated to the protection and conservation of the Hudson River and its watershed. The 9/9A Alternative presents many potential environmental impacts which FERC must adequately address and mitigate.

1/ EPA website at www.epa.gov/region02/superfnd/hudson.

9-5 We believe the FEIS correctly identifies environmental impacts associated with construction of the 9/9A Proposal and identifies appropriate minimization, avoidance, and mitigation for these impacts.

Comment Summary 9-6: The Hudson River North Alternative is longer than the proposed route and would avoid the 2.1 mile crossing of the Hudson River, but may have to be routed around residential areas. The Tappan Zee Bridge Alternative would be considerably shorter than the proposed route and would avoid the Haverstraw Bay area, but would impact more residential and commercial land and would require a longer river crossing. Construction in residential and commercial land has been recommended for other portions of the project. The FERC should collect additional data associated with these alternatives that include at a minimum the number, type and acreage of wetlands impacted; forested areas impacted, and the number, water quality classification, and names of streams crossed.

9-6 The Hudson River North Alternatives are not feasible because of existing utility and industrial development on both banks of the river at the alternate crossing location and the lack of other viable staging areas in the vicinity. The Tappan Zee Bridge Alternative has similar constraints in that the parks (Memorial Park in South Nyack and Lucee Park in Tarrytown) are not large enough to allow for the staging and storage of pipe, the crossing equipment, and the open trench. Without a feasible crossing location, these alternatives cannot be used.

Comment Summary 9-7: The Commission should reconsider alternative routes that avoid a crossing of Haverstraw Bay. The Tappan Zee Bridge Alternative, identified in the SDEIS, would reduce the length of pipeline by 8 miles and the Hudson River crossing would only be 0.6 mile longer. Nothing in the SDEIS suggests that the route would be impractical. In fact, the SDEIS states that "[i]f an open-cut crossing of the Hudson could be staged between the Memorial Park in South Nyack and Lucee Park in Tarrytown, this alternative may be feasible from a construction standpoint." The route should be investigated further.

9-7 While possibly feasible from a construction standpoint, the available workspace for staging at the river edge is not adequate, this alternative would still be within designated EFH in Haverstraw Bay, and would impact residences and businesses in South Nyack, and Tarrytown. For these reasons, we found it offers no significant environmental or other advantage over the proposed route across the Hudson River, or the various routes proposed in Westchester County.

Comment Summary 9-8: The New York State Thruway Authority is initiating review of alternatives to address structural and operational needs of the Tappan Zee Bridge and the I-287/I-87 corridor. The possibilities may include replacing the existing bridge with a new one near the existing one. This should be included in the discussion of the Hudson River Alternatives.

9-8: Comment noted. See section 6.1.2 of the FEIS.

Comment Summary 9-9: The crossing of the Hudson River will have serious and irreversible environmental impacts that far outweigh the added incremental cost of an alternative route that would avoid Haverstraw Bay. The bay supports populations of federally-listed endangered species (the shortnose sturgeon), is rated by the State of New York as an "irreplaceable" estuarine ecosystem, and is described as a "major spawning, nursery, and wintering area for various etuarine fish species," having "population levels unusual in the northeastern U.S.," and "one of the most important fish and wildlife habitats in the Hudson River estuary." [2/] The Commission and Millennium downplay the extent and severity of impacts that dredging will have on the bay. Focusing on the surface area of direct impact misrepresents the nature of ecosystems and the effect that disturbances can have on the ecological functions of the bay.

9-9 We did not consider the added cost of alternative routes across the Hudson River a deciding factor in rejecting them. The primary reason for rejecting the northern alternative crossings (e.g. adjacent to the Algonquin and powerline rights-of-way) is the inadequate staging available at the crossing and the impacts to properties along the overland portion of the alternative routes. The southern alternative crossing (e.g. north of the Tappan Zee Bridge) has similar constraints and would still require construction within designated EFH. We evaluated the effects of pipeline construction on threatened and endangered species and designated EFH habitat for both the proposed route and these alternatives in our BA and EFH Assessment (issued in January 2001). We note that the NYSDEC has approved the proposed Hudson River crossing in its section 401 Water Quality Certificate with numerous conditions to minimize environmental impacts. Also, NMFS issued an incidental take statement which has reasonable and prudent measures, terms and conditions to minimize impacts to the shortnose sturgeon.

2/ LWRP, at II-51, II-53 (Exhibit B,Tab 8).

Comment Summary 9-10: Based on the record, the Village of Croton-on-Hudson concludes that the proposed crossing of Haverstraw Bay will: 1) cause direct mortalities of endangered shortnose sturgeon; 2) destroy portions of critical spawning, nursery and wintering habitat and the benthic communities upon which fish species rely; 3) increase turbidity and cause associated blocking of sunlight; 4) increase bioaccumulation of toxic substances, leading to more widespread cumulative impacts to species higher in the food chain such as bald eagles; and 5) decrease biological productivity and disrupt ecological functions throughout the bay. The village believes that the NMFS should not issue an incidental take permit and that the only reasonable and prudent measure that can be taken with regard to endangered species impacts would be to re-route the pipeline around Haverstraw Bay.

9-10 See response to comment 9-9.

Comment Summary 9-11: As indicated in the FERC's April 20, 2001, the FERC will continue a comprehensive analysis of alternatives for this project to address EFH conservation recommendations. The March 22, 2001 letter continues to represent the NMFS's position of record for the environmental concerns of this project.

Thank you for your comments. See sections 4.4.1 an 5.4.1.2 for EFH discussion.

LAKE ERIE (F1, F3, O15, I9, I10, I11)

Comment Summary 10-1: As noted in comments on the DEIS, additional information, various analyses, and consultation on the crossing of the Neversink River and Lake Erie should be included in the FEIS. This information is not provided in the SDEIS and it should be in the FEIS.

10-1 Section 2.2.3 of the SDEIS contained much more information on Lake Erie and various consultations, including discussion on ice scour, turbidity and sediment deposition, potential for encountering contaminated sediments, and the Pennsylvania section 401 Water Obstruction and Encroachment Permit (appendix IIC). Millennium received its CZM consistency determination in Pennsylvania in August 1999. The FEIS includes additional information on Lake Erie fisheries in section 5.4.1.

Additional discussion on the Neversink River is included in section 5.6.2 of the FEIS.

Comment Summary 10-2: In its letter dated April 28, 2000, the DOI recommended avoiding the crossing of Lake Erie because of the potential impacts of constructing and operating a pipeline along the bed of Lake Erie, including impacts related to temporary increases in turbidity and sedimentation, fish movement disruption, fish and wildlife mortality from leaks, and the potential release of oily condensate that tends to accumulate in pipelines. Alternative routes, such as a crossing at Grand Island where directional drilling has been successfully done, should be included in the FEIS. If the proposed Lake Erie crossing is constructed, the DOI agrees with the NYSDEC's recommended window of June 1 to November 30.

10-2 Comment noted. Section 3.2.4 includes a discussion of four system alternatives considered for the Lake Erie crossing. Section 3.3.1 includes a discussion of route alternatives across Lake Erie.

Comment Summary 10-3: The Great Lakes United is a binational coalition of 170 environmental, conservation and sport groups, tribes, municipalities and businesses whose mission is to protect and restore the Great Lakes-St. Lawrence River ecosystem. The coalition opposes the proposed pipeline crossing of Lake Erie.

10-3 Millennium has received its 401 water quality certification from Pennsylvania and its coastal zone management consistency determination. See appendix L of this FEIS.

11 VEGETATION AND WILDLIFE (F3, C13, C14, O14, Various WC)

Comment Summary 11-1: Because the project would have significant temporary and permanent impacts to forests, wetlands, and waterbodies, a detailed mitigation plan should be prepared that adequately compensates for these impacts. Impacts should be compensated on a per-watershed basis to the extent practicable.

Most effects from pipeline construction are temporary and the non-forested right-of-way and waterbodies should fully recover within a few years. We require that native trees be planted in forested wetlands to eventually restore the temporary and non-maintained portion of the permanent right-of-way to its preconstruction state. Under the COE permit, Millennium would be required to mitigate for wetlands impacts. The pipeline easement does not prohibit or impede use by wildlife and, where required by land management agencies, the right-of-way

will be restored to improve habitat value. We believe these measures adequately mitigate for impacts and do not believe that additional mitigation is needed.

Comment Summary 11-2: The SDEIS mischaracterizes the bald eagle habitation of the area as limited to overwintering. The entire Croton River area is known among local bird watchers and local chapters of the Audubon Society to be a fairly common bald eagle habitat. Actual sighting reports from village residents indicate that bald eagles inhabit this area at various times throughout the year. One village resident has observed bald eagles, including immatures, from his home on the Croton River in the fall of 2000 and the spring of 2001. Other species within the Croton River gorge include the Cooper's hawk (state species of special concern), trout habitat in the Croton River, and two rare species of dragonfly (the blue-fronted dancer and umber shadowdragon).

11-2 Comment noted. As noted in section 5.4.2 of the FEIS, the more mobile species would be temporarily displaced from the construction right-of-way and surrounding areas to similar habitats nearby. These species would return to the newly disturbed area and adjacent undisturbed habitats soon after construction. Predatory species such as the hawk commonly use utility rights-of-way for hunting. Construction effects on bald eagles are described in section 5.6.3 of the FEIS and would be temporary.

Comment Summary 11-3: It appears that most of the trees that provide a natural visual barrier between the ConEd powerline structures and residences would be removed. These trees also provide forest cover for wildlife.

11-3 In section 5.8.6 of the FEIS we note that the expansion of existing corridors, while preferable from an environmental standpoint, may result in visual impacts, particularly in areas where existing vegetation provides screening of powerline rights-of-way from nearby residences. We understand that the loss of trees would be most noticeable near residences where trees screen the view of the existing electric powerline structures and right-of-way. To minimize these impacts, Millennium proposes to attempt to preserve mature trees and landscaping wherever possible by working around them and has met with many affected landowners along the ConEd right-of-way to discuss the development of site-specific plans to customize construction on each property. In addition, Millennium and the PSCNY have agreed to reduce the offset from the ConEd structures in certain areas to allow preservation of existing trees on the ConEd right-of-way. These areas are located at MPs 0.5 to 1.2 (Westminster/Watch Hill area), MPs 2.4 to 3.2 (Jane E. Lytle Arboretum/Hessian Hills area), and MPs 7.0 to 7.2). Also, see discussion in section 6.2.6.1 of the FEIS.

Comment Summary 11-4: The ConEd Offset will cross an area between MPs 392 and 399 that contain multi-land uses and the community has maintained a woodland corridor between developed land and the ConEd right-of-way. This corridor serves as a visual screen, contains streams and wetlands, and provides habitat for wildlife. The pipeline route would eliminate this woodland corridor in several areas.

11-4 See response to comment 11-3

12. **WETLANDS** (F1, C13, C14, O3, O8, Various WC)

Comment Summary 12-1: Wetland issues and concerns identified in EPA's review of the DEIS have not been addressed in the SDEIS for either the Route 9/9A routing or the entire project. The document does not contain adequate information regarding exact acreage, location, and vegetation community type of wetlands impacted in accordance with the appropriate methodology (i.e., the 1987 COE Manual). The FEIS must present a complete delineation of all wetlands that would be impacted by the project and wetlands should be described in terms of dominant species, diversity, and size. Once the affected wetlands have been delineated, impacts must be quantified for each alternative.

12-1 Each wetland that would be crossed by the proposed pipeline is listed in appendix I of the FEIS. A summary is provided in table 5.7.3-1 of the FEIS. Appendix I lists each individual wetland and identifies the wetland by number, milepost, station number, NWI cover classification, crossing length, acreage affected, and whether or not it is a state-regulated wetland. Appendix I also identifies wetlands where additional mitigation (primarily replanting) is proposed. We believe this provides sufficient information on which to evaluate potential wetland impacts. Actual wetland delineation forms are contained in 2 volumes that were filed with the Commission. This documentation is considered too voluminous for publication as part of the EIS, but is available as part of the public record on the FERC RIMS website at www.ferc.gov. We also note that the COE states that it will require a mitigation plan as part of its permit issued for the project.

Potential wetland impacts (i.e. total acres of impact) for each of the alternatives are presented in the comparison tables in section 6.0 of the FEIS, where these data were available from either field surveys or NWI mapping. We do not believe it is reasonable to identify alternative routes for each of the 673 wetlands that

would be crossed since it is unreasonable to assume that a linear project could avoid all wetlands without undue impact on other resources. However, we did examine avoidance alternatives for all state-regulated wetlands and all predominantly forested wetlands where the crossing length would exceed 500 feet (see sections 3.4 and 5.7.2 of the FEIS). Also, since Millennium proposes to place its facilities adjacent to or within existing rights-of-way, creating a new corridor to avoid a wetland crossing could increase overall environmental impact.

Comment Summary 12-2: The SDEIS does not present an adequate discussion of measures to mitigate for the wetland impacts. The FEIS must present a detailed mitigation plan, including a wetland mitigation map showing the acreage and location of all proposed wetland vegetation communities, that proposes adequate compensation for all unavoidable losses of wetland values and functions. The project should strive to result in no net loss of wetlands and a 5- to 10-year mitigation monitoring plan should be provided.

12-2 Pipeline construction does not typically result in the conversion of wetlands to uplands. Rather, construction may convert forested wetlands to other wetland types (e.g., emergent and scrub-shrub wetlands). Mitigation for impacts would be included in the COE permit, if necessary. Our Procedures (section V.E.3) require monitoring of wetland revegetation for 3 to 5 years. If revegetation is not successful after 3 years, Millennium would be required to develop and implement a remedial revegetation plan in consultation with a professional wetland ecologist.

Comment Summary 12-3: Wetland field delineations of the 9/9A Proposal have not been completed. To compare the impacts from the originally proposed ConEd route with the 9/9A Proposal, detailed wetland field delineations should be performed and confirmed by the COE.

12-3 Millennium completed wetland field delineations for all but one of the 12 wetlands crossed by the 9/9A Proposal (see section 4.3.3 of the SDEIS) and for the originally proposed ConEd route. However, field delineations were not completed for the ConEd Offset/State Route 100 Alternative. Therefore, we used NWI mapping for the wetland comparisons presented in table 6.1.2-2 of the SDEIS. Millennium has now completed wetland delineations of the proposed ConEd Offset/Taconic Parkway Alternative as presented in section 6.2.6 of the FEIS.

13. RECREATION AREAS (C4, C7, C12, C13, C14, C15, O6, O8, O18, Various WC)

Comment Summary 13-1: The Village of Croton-on-Hudson's trail system was first initiated in the early 1990s and is being developed under the village's Trail Master Plan in association with New York State's Green Way Program. The trail system consists of a village-wide network of natural footpaths crossing the entire village and links areas such as the Croton River, Jane E. Lytle Arboretum, and Brinton Brook Sanctuary. The ConEd Offset/Taconic Parkway Alternative would effectively obliterate one section of the Highland Trail between the arboretum and the Brinton Brook Sanctuary.

13-1 As noted in section 6.2.6, the ConEd Offset/Taconic Parkway Alternative would cross the Brinton Brook Sanctuary Bird Trail, the Highland Trail, and the Aboretum Spur Trail. While installation of the pipeline would temporarily limit use of the trails, they would not be obliterated. Following construction, the trails (like other trails crossed by the project across the state) would be restored in a manner consistent with Millennium's ECS.

Comment Summary 13-2: The City of Yonkers has one concern with the use of the Sprain Reservoir outlet that can be worked out as part of the engineering design but should be made a part of the project mitigation. The activation and use of the Sprain Reservoir into a freshwater recreational resource is a project proposed in the city's recently adopted Comprehensive Plan. Although plans have not yet been developed, the area immediately south of the dam is being considered for a small parking lot to permit boat access to the reservoir. No plans have yet been developed, but there are no other Yonkers-controlled locations that could be used for access so it is crucial that the pipeline can coexist with this proposed use. The city is certain that a solution can be worked out and asks only that such an agreement be memorialized in the environmental record.

13-2 Comment noted. Table 4.8.3-1 and 5.8.3.2-1 have been revised to include the City of Yonkers' plans for a boat launch facility at the dam.

Comment Summary 13-3: The ConEd Offset/State Route 100 Alternative and the Taconic Parkway Alternative present other critical impacts which need to be addressed prior to the issuance of a FEIS. For example, the Brinton Brook Sanctuary and Jane E. Lytle Arboretum could be seriously impacted.

3-3 Since publication of the SDEIS, Millennium and the PSCNY have developed a SMOU for construction along the ConEd right-of-way, Millennium has surveyed a preferred route, and landowners and abuttors along these alternatives have been notified and have provided comments. See section 6.2.6 of the FEIS for information about the Brinton Brook Sanctuary and the Jane E. Lytle Arboretum.

Comment Summary 13-4: The ConEd Offset/Taconic Parkway Alternative would have adverse environmental impacts on two notable nature preserves. In the Croton arboretum [Jane E. Lytle Arboretum], the pipeline would be constructed and maintained from a road permanently located within the arboretum, the visual quality of the parcel will be degraded, the water quality and quantity in both intermittent and perennial streams that feed the arboretum wetland will decrease, and the vegetation that blocks the growth of invasive giant reeds will be removed. In the Teatown Lake Reservation, the pipeline will have adverse effects on wildlife habitats, wildlife species, wetlands, and on-site education programs for children and adults.

13-4 See section 6.2.6 for discussion of the ConEd Offset/Taconic Parkway Alternative and potential environmental impacts and mitigation.

Comment Summary 13-5: The Greenburgh Town Board has unanimously approved a resolution opposing the Millennium Pipeline Project through the Town of Greenburg. Many residents and all of the members of the Town Board object to having the pipeline placed on recreational land (e.g. the Putnam right-of-way bike trail). Use of this recreational land must be approved by the state legislature.

13.5 Comment noted. If the project is approved, Millennium would need to obtain the appropriate permits. However, we note that although the Commission encourages cooperation between interstate pipelines and local authorities, this does not mean that state and local agencies, through application of state or local laws, may prohibit or unreasonably delay the construction or operation of facilities approved by the Commission.

14. JANE E. LYTLE ARBORETUM AND BRINTON BROOK SANCTUARY (C13, C14, O3, Various WC

Comment Summary 14-1: The ConEd Offset/Taconic Parkway Alternative would have serious impact on the Village of Croton-on-Hudson's Jane E. Lytle Memorial Arboretum, a unique 20-acre ecological sanctuary consisting of pristine natural wetlands and forest habitat. While Millennium states that the pipeline would cross the edge of the arboretum and would only alter the vegetation in one small area, the village's assessment indicates that permanent and irreversible impacts would occur on 25 percent of the total area of the arboretum (unless reduced by incorporation of the PSCNY's consent to reduce the offset from the conductors by 35 feet in the vicinity of arboretum and Hessian Hills). Construction in the arboretum would require clearing of forest vegetation, impact an area far greater than 5 acres due to the removal of the forested buffer, allow introduction of invasive species such as *Phragmites australis*, alter surface water flows thus threatening the long-term viability of the arboretum's wetlands, impact wildlife using the wetlands, and threaten water quality from sediment run-off, increased turbidity, and releases of fuels and other contaminants.

14- The reduced offset would be incorporated into the ConEd Offset/Taconic Parkway Alternative. Also, see response to Comment Letter O3 and section 6.2.6 of the FEIS for discussion of construction and restoration through the arboretum.

Comment Summary 14-2: It is appalling that so environmentally sensitive a route as the ConEd Offset/Taconic Parkway Alternative is the one most likely to be chosen. Reasons against selection of this route include the proposed crossings of: Haverstraw Bay and Croton River Estuary, Brinton Brook Sanctuary, Jane E. Lytle Arboretum, and well fields for the Village of Croton-on-Hudson at the Croton River.

14-2 See discussion in section 6.2.6 of the FEIS regarding these proposed crossings.

Comment Summary 14-3: The SDEIS identified the ConEd Offset/State Route 100 Alternative that will create major and permanent impacts on two nature preserves that adjoin the ConEd right-of-way: the Jane E. Lytle Memorial Arboretum and the Saw Mill River Audubon Society's Brinton Brook Sanctuary. The arboretum contains an approximate 10-acre wetland that has been documented as habitat for the endangered Blandings turtle. The stream flowing out of the arboretum feeds a protected village-owned wetland (the Kaplans Pond/Bessemer wetland complex) that provides habitat for one endangered and two threatened plant species. In addition, the organization recently completed a wetland boardwalk to provide an outdoor science classroom. The Brinton Brook Sanctuary lies approximately 0.5 mile northwest of the arboretum, separated by land owned by ConEd and the Hudson National Golf Club. Approximately 30 species of birds have been documented within the sanctuary. The arboretum and Brinton Brook are surrounded on three sides by suburban development and the forest cover between the preserves and the ConEd right-of-way provide the last remaining unfragmented woodland in the area.

The ConEd offset will require permanent removal of forest adjacent to the preserves and will have the following additional impacts: 1) blasting will alter the topography and change surface and groundwater flows that supply the wetlands and stream; 2) removal of upland forest will decrease critical habitat for approximately 30 bird species; 3) removal of upland forest will expose adjacent remaining woodlands to invasion by non-native species established in the ConEd right-of-way; 4) removal of trees near the feeder stream will decrease both the quantity and quality of water on which the downstream wetland of the arboretum is dependent; 5) construction across the stream will impact the stream's water quantity and quality; and 6) removal of trees between the arboretum wetland and the ConEd right-of-way will expose the wetland to invasion by phragmites.

14-3 Comment noted. See section 6.2.6 of the FEIS for our analysis of the ConEd Offset Alternatives.

Comment Summary 14-4: The FERC should eliminate any alternative that is adjacent to the ConEd right-of-way. If the ConEd Offset is used, the pipeline should be moved to the northeast side of the ConEd right-of-way in the vicinity of the arboretum.

14-4 Comment noted. However, this may require additional mitigation with the PSCNY because of the higher voltage line on that side of the right-of-way and the crossover. In addition, during our field visit, we found that the abuttors on the northeast side of the right-of-way were opposed to relocation of the pipeline.

Comment Summary 14-5: Letters sent to Millennium in spring 2000 regarding the arboretum's concerns were never acknowledged.

14-5 We are aware of at least one letter from Millennium to the arboretum that commented on the arboretum's concerns.

Comment Summary 14-6: In the event that Brinton Brook is crossed by the pipeline, the FERC should require the same level of care to this critical waterbody as will be used for the crossings of other sensitive waterbody crossings in the area.

14-6 Brinton Brook would not be crossed by either the proposed route or the ConEd Offset/Taconic Parkway Alternative, although several tributaries to the Hudson River would be crossed. These crossings would be dry crossings using a dam and pump. Millennium would be required to implement the requirements identified in its ECS and our Procedures for any waterbody crossing.

Comment Summary 14-7: There has been no environmental impact review of the pipeline's effect on the arboretum or Kaplans Pond/Bessemer wetland complex downstream of the arboretum.

14-7 Section 6.2.6 of the FEIS contains our environmental analysis of the ConEd Offset/Taconic Parkway Alternative and potential impacts on the arboretum. Since Millennium would use a dry crossing technique to cross waterbodies within the arboretum and sediment control barriers in the wetlands, there would be minimal impacts on downstream wetland complexes, including the Kaplans Pond/Bessemer wetland complex.

Comment Summary 14-8: The arboretum abuts the ConEd right-of-way for approximately 775 feet and will be affected by the ConEd Offset/Taconic Parkway Alternative. There was no notice of this route. It was only identified as the preferred route at the April 9, 2001 public comment meeting.

14-8 We were not aware of this alternative until it was announced at the April 9, 2001 meeting. We notified all abuttors of this alternative on April 26, 2001 and allowed 30 days for public comment.

Comment Summary 14-9: The arboretum is a municipally-owned park in a community that is a participant in the Coastal Zone Management Program. The ConEd Offset/Taconic Parkway Alternative through the arboretum is inconsistent with policies 19, 19A, 23(5), 25, 25A and 44 of Croton's Local Waterfront Revitalization Plan.

14-9 The NYSDOS is responsible for determining if the project is consistent with New York's CZM policies.

Comment Summary 14-10: Although construction techniques specified in Millennium's ECS could be expected to protect watercourses from short-term impacts during construction, there is the potential for long-term impacts on water quality and quantity from the creation of a temporary and/or permanent access road and the replacement of mature woodland with brush in the arboretum.

14-10 Millennium has not indicated that it would create a new temporary or permanent access road, but would use the existing access road along the ConEd right-of-way. The construction right-of-way would also be used during construction adjacent to the arboretum, but would be restored following installation of the pipeline. After the pipe is installed adjacent to the arboretum, the construction right-of-way would be restored.

Water quality impacts are associated mostly with erosion, which can be controlled by use of erosion controls described in our Plan and Procedures and Millennium's ECS. While water quantity (runoff vs. infiltration and evapotranspiration) may change, the construction right-of-way is such a small percentage of the watershed that it is not significant. The EIS also recognizes that some woodland would become part of the permanent right-of-way.

Comment Summary 14-11: The unusual diversity and ecological quality of the arboretum wetland has been documented by four environmental professionals. This wetland will be permanently impacted by the invasion of phragmites from the ConEd right-of-way if the wooded buffer is removed. There are no known effective controls for this invasive species.

14-11 Millennium proposed several methods to minimize the spread of phragmites into the arboretum's wetland, including preserving at least a 15-foot buffer of trees (through use of a reduced construction right-of-way), replanting of the areas outside of the 10-foot-wide clear zone with trees and shrubs selected in consultation with the arboretum, implementing a maintenance program for hand removal of phragmites during routine right-of-way maintenance activities, and selective removal of large trees. In addition, the PSCNY has agreed to allow the pipeline to be moved 35 feet closer to the powerline through the arboretum and we have recommended that construction disturbance may not encroach on the wetland. We believe use of these measures will help reduce or even avoid the spread of phragmites into the arboretum's wetland.

Comment Summary 14-12: The arboretum is bordered on three sides by the lawns of subdivisions and the turf of the golf course. The only deep forest habitat occurs along the border with ConEd. An estimated 5 acres, or 25 percent, of this interior forest habitat will be lost. This will impact bird species and amphibians that are dependent on interior woodland habitat for their survival. It will also strip away existing woodlands that shade and protect two of the hiking trails and the Arboretum's wetland.

14-12 See discussion in section 6.2.6 regarding a reduced offset in certain segments of the ConEd Offset/Taconic Parkway Alternative to preserve existing woodland along the ConEd right-of-way.

Comment Summary 14-13: Shifting the pipeline alignment at least 300 feet northeast of the arboretum/ConEd property line will spare the arboretum from the impacts noted above.

14-13 We assume you are referring to placement of the pipeline between the ConEd towers. As explained in section 6.1 of the SDEIS, this is not a viable option.

15. **TEATOWN LAKE RESERVATION** (S17, C14, O8, Various WC

Comment Summary 15-1: The Teatown Lake Reservation is a 733-acre nature preserve that includes wetlands, streams, a 33-acre lake, and trails. It is also a part of the Croton Watershed. There are over 3,000 environmental education programs per year and over 30,000 people visit the preserve each year to walk the trails, or attend the numerous school, weekend, and evening programs. The Teatown Lake Reservation is concerned about construction through the reservation and its impact on wetlands, upland vegetation, the lake, and educational programs.

15-1 See section 6.2.6.1 of the FEIS for a description of proposed construction through the Teatown .ake Reservation.

Comment Summary 15-2: The Teatown Lake Reservation is concerned since it has received no details on actual construction methods or the route through the reservation.

15-2 Millennium has completed surveys and has identified a preferred route through the reservation

Comment Summary 15-3: The Teatown Lake Reservation is strongly opposed to construction of a natural gas pipeline anywhere through the preserve.

15-3 Comment noted

Comment Summary 15-4: The area around the proposed pipeline route contains nesting areas of worm eating warblers, blue wing warblers, Louisiana thrush, northern water thrush, and other bird species. It is also heavily used during migration by the golden-winged warbler and yellow-breasted chat, and as nesting areas for Cooper's and red-shouldered hawks, all of which are listed as New York State Species of Special Concern.

15-4 See section 5.4.2 of the FEIS for a discussion of potential impacts on bird species. These impacts would be the same within the Teatown Lake Reservation.

Comment Summary 15-5: Pipeline construction would adversely affect two very important wetlands containing marbled salamanders, 4-toed salamanders, spotted turtles, and eastern box turtles, all of which are listed on the New York State Species of Special Concern. One of the wetlands is very healthy and, at present, contains no invasive plants. Once disturbed by construction and opened to the sun, numerous invasive wetlands plants, such as purple loosestrife and phragmites, will take root and spread throughout the wetland.

See section 6.2.6 of the FEIS for a discussion of ConEd Offset/Taconic Parkway Alternative and potential impacts on wetlands.

Comment Summary 15-6: The pipeline would cross a section of Teatown Lake which is very shallow in some sections and is only 8 feet deep at the deepest point. The shallow depth of the lake will cause the pipeline (2 feet in diameter encased in 3 inches of concrete) to be exposed above the surface of the water or, at the very least, will prevent the use of canoes or rowboats in that area of the lake for educational programs.

Millennium proposes to bury the pipeline, which will avoid concerns associated with pipe exposure or loss of use for canoes and rowboats.

Comment Summary 15-7: The pipeline would have adverse effects on the Teatown Lake Reservation, its educational and land protection efforts, and its woodlands and wetlands. The Teatown Lake Reservation urges the FERC to seek alternate routes around the reservation for the safety and well being of the wildlife that seek refuge on the preserve as well as the visitors who walk the trails or attend the many environmental educational programs.

15-7 Comment noted. See section 6.2.6 of the FEIS for a discussion on the ConEd Offset/Taconic Parkway Alternative and potential impacts on the Teatown Lake Reservation. Also see sections 3.0 and 6.0 of the FEIS for discussion of alternatives. The only practical alternative that would avoid the Teatown Lake Reservation would be the 9/9A Proposal.

Comment Summary 15-8: If ConEd does not want the pipeline under its electric transmission line because of the possibility of an explosion, then this risk of an explosion is of even greater concern in the Teatown Lake Reservation where schoolchildren are enjoying the peaceful nature preserve.

15-8 We believe that if the pipeline is constructed and operated as designed and in conformance with USDOT specifications and any other requirements, such as those in the PSCNY SMOU, then there is no reason to presume that the pipeline is inherently unsafe or likely to explode.

16. COASTAL ZONE MANAGEMENT (F1, C13)

Comment Summary 16-1: The results of the CZM consistency consultation with the States of New York and Pennsylvania should be incorporated into the FEIS.

16-1 Millennium received its CZM consistency determination from Pennsylvania in August 1999. Appendix IIF (June 2000) in the SDEIS and appendix J (March 2001) in the FEIS contain Millennium's New York Coastal Zone Management Policy Consistency Determination. The NYSDOS review is underway and will be completed in fall 2001.

Comment Summary 16-2: The entire Village of Croton-on-Hudson is located within New York's designated coastal zone. In accordance with its LWRP adopted on March 16, 1992, the village conducted a review of the consistency of the proposed pipeline with the policies of the LWRP and submitted its findings to the NYSDOS on June 25, 2001. The village has determined that the proposed pipeline is not consistent with the LWRP and has recommended to the NYSDOS that Millennium's consistency certification be denied. However, the village concluded that an alternative route that avoids Haverstraw Bay, the Croton River, the village's wellfield, and the arboretum would be consistent with the LWRP.

16-2 Comment noted.

17. TRAFFIC ALONG THE 9/9A PROPOSAL (WC)

Comment Summary 17-1: A growth rate for traffic volumes of 1 percent per year was used for the queuing and capacity analysis. Data published by the New York State Department of Transportation (NYSDOT) show that Annual Average Daily Traffic (AADT) volume on Route 9A in the vicinity of Route 133 increased at an annual rate of 3.1 percent over the period 1996 to 1999. An appropriate growth rate should be determined and should be used to project future traffic volumes. The queuing and capacity analysis that were performed in the Traffic Impact Study (TIS) using future traffic volumes developed with the erroneous 1 percent annual growth rate should be recomputed.

17-1 After reviewing the growth rates on all the links and consulting with the New York State Regional Planning Agency, it was determined that the application of a 2 percent annual growth rate to estimate future traffic volumes in this corridor is more appropriate. The queue length analysis contained in the original TIS has been recomputed to reflect the revised projection of traffic volumes. The queue analysis estimates the effects of a single lane closure (in one direction) on a four-lane highway using methodology prescribed by the *1997 Highway Capacity Manual (TRB Special Report 209, 1997)*. The results of the revised queuing analyses are presented in *Table 1*. The table shows, for a specified link, the time period in which queuing would occur, the maximum length of the queue within the aforementioned time period and the peak delay encountered by a vehicle in the queue.

Using revised traffic volumes, queuing along the relevant northbound sections of U.S. Route 9, State Route 9A and relevant southbound sections of State Route 9A/100 (as defined in the TIS) was analyzed. Time periods analyzed are identical to those that were selected in the TIS. The results of the revised queuing analysis show that a right lane closure on U.S. Route 9 northbound at 7 p.m. would produce queuing along a particular segment of U.S. Route 9 northbound, the same segment as identified in the TIS. Because of the revised traffic volumes, queue duration, length and delay time along this segment increased from the previously calculated values. Additional analyses reveals that queuing immediately after the 7 p.m. closure can be avoided if the start time of the lane closure on U.S. Route 9 northbound is changed to 8 p.m. Based on the revised analyses and consistent with the recommendation in the SDEIS, the lane closure on U.S. Route 9 should begin at 8 p.m.

The new analyses reveal that queuing is not predicted along State Route 9A northbound during pipeline construction. This finding is the same as contained in the TIS.

The revised queuing analyses for State Route 9A/100 southbound show that queuing would occur immediately following the start of the lane closure at 10 a.m. For all three southbound segments of State Route 9A/100, the delays incurred immediately following the lane closure would not be significant: the maximum expected delay would be 12 minutes. During the afternoon peak period, the queue lengths and delay times would substantially increase. Delays of up to 84 minutes would be expected during the evening peak, with queue lengths reaching a maximum at approximately 6 p.m. The SDEIS recommends that Millennium avoid construction for an additional 4 hours during the peak evening traffic period between the hours of 3 p.m. and 7 p.m. Based on the results of the revised queuing analysis, there is no significant change in our analysis as presented in the SDEIS or our recommendation.

Table 1. Queues due to Lane Closure

Link	SDEIS Duration of Queue	SDEIS Maximum Queue Length (feet)	SDEIS Approx. Peak Delay in minutes*	Revised Duration of Queue	Revised Maximum Queue Length (feet)	Revised Approx. Peak Delay in minutes*
Route 9 Northbound						
Welcher Avenue Ramps to State Route 9A Ramps (MP392.7,Cortlandt)	No queue	0		No queue	0	
State Route 9A Ramps (MP392.7,Cortlandt) to Croton Point Avenue	7:00PM to 8:45 pm	2,500	6 minutes	7:00PM to 9:00 pm	8,440	20 minutes
Route 9A Northbound						
Route 9/9A Junction (Croton River) To Route 134 (Croton Dam Road)	No queue	0		No queue	0	
Route 134 (Croton Dam Road)To Route 133 (Somerstown Road)	No queue	0		No queue	0	
Route 133 (Somerstown Road) To Route 100 (Saw Mill River Road)	No queue	0		No queue	0	
Route 9A/100 Southbound						
Route 9A/100 Junction to Town of	No queue	0		10:00 AM to 11:00 AM	600	2 minutes
Mount Pleasant (MP 402.5)	No queue	0		3:00 PM to 6:15 PM	3,520	8 minutes
Town of Mount Pleasant (MP 402.5) to Route 117	10:00 AM to 11:45 AM	1,700	5 minutes	10:00 AM to 3:00 PM	4,920	12 minutes
(Bedford Road)	3:00 PM to 8:15 PM	10,800	25 minutes		36,840	84 minutes
				3:00 PM to 9:00 PM	2,480	6 minutes
	3:00 PM to 7:45 PM	8,900	20 minutes	10:00 AM to 11:45 PM 3:00 PM to	27,040	62 minutes

* Assumes a travel speed of 5 MPH.

Comment Summary 17-2: The SDEIS states that the average accident rate for State Route 9A northbound is 2.26 accidents per million vehicle-miles. This rate is compared in the SDEIS to the NYSDOT average rate of 1.99 accidents per million vehicle-miles for the same class of roadway facility. The latter is calculated for both directions of traffic along a segment. If the accident rate for one direction of traffic is already above the statewide average, the actual accident rate for both directions of State Route 9A is probably much higher. The accident analysis must be recomputed to accurately reflect current operating conditions along this section of State Route 9A.

17-2 The SDEIS incorrectly characterized the calculated accident rate for State Route 9A as applying to the northbound direction only. The average accident rate of 2.26 accidents per million vehicle-miles was calculated utilizing accident and volume data for both directions of the section of State Route 9A in question. The same is true for U.S. Route 9 and State Routes 9A/100. The accident analysis remains valid and has not been recalculated.

Comment Summary 17-3: The SDEIS states that analyses were performed to estimate the traffic queues that would form if one lane of traffic were closed for construction. As noted on Page 5-35, State Route 9A is considered an "Urban Principal Arterial Street" by NYSDOT. The queuing analysis was completed for a freeway work zone. Using a freeway work zone to estimate the impacts of construction and a lane closure on an arterial is completely inappropriate and misleading. The analysis must be completed using a methodology applicable to arterial roadways.

17-3 The methodology used to estimate the traffic queues reported in the SDEIS was based on procedures defined in the *1997 Highway Capacity Manual (TRB Special Report 209, 1997)*, Chapter 6, Section IV, "Capacity of Freeway Work Zones". Upon close examination of the methodology in the aforementioned section of the 1997 Highway Capacity Manual, it is clear that the sole portion of the methodology which is dependent on the functional classification (i.e. freeway or four-lane highway) of the roadway being evaluated is the determination

of the capacity of the facility with an adjacent work zone. Once an appropriate capacity is determined, the remainder of the methodology can be implemented, regardless of the class of the facility. Therefore, if an appropriate capacity is determined for State Route 9A and State Route 9A/100, the queue estimation techniques contained in the 1997 Highway Capacity Manual yields valid results, provided that the segment being analyzed is not in the proximity of any intersections. The *Highway Capacity Manual* contains universally accepted techniques for estimating capacity and level of service for transportation facilities. In the absence of an accepted methodology which can estimate queuing adjacent to a work zone on an arterial or multi-lane highway, the analysis procedure contained in the Highway Capacity Manual for freeways was utilized. This approach was taken because it was believed that certain sections of State Routes 9A and 9A/100 exhibited characteristics common to freeway facilities, including grade separated interchanges. Additionally, certain segments of States Route 9A and 9A/100, with one of two lanes closed for construction, exhibit characteristics similar to those found on a two-lane freeway with the breakdown lane and one of two travel lanes closed for construction. Roadway characteristics which have an effect on capacity, such as the proximity of the open lane to the adjacent work area and the width of the open lane, would be similar when comparing a freeway to State Routes 9A and 9A/100. Because it is believed that the capacities are comparable, the methodology described in the 1997 Highway Capacity Manual and referenced above was employed in the analysis contained in the SDEIS and in this response. The latest edition of the *Highway Capacity Manual (TRB, 2000)* revises the method used to determine the capacity of a lane adjacent to a freeway work zone based on more recent studies. Using conservative estimates of the intensity of the work and percentage of trucks in the traffic stream, the capacity, using equation (22-2) of Highway Capacity Manual 2000, was calculated to be 1,286 vehicles per hour (vph), consistent with the estimate that was employed in the analysis contained in the SDEIS.

Additionally, because there are signalized intersections along State Route 9A, it is the capacity of these intersections that will determine the operating conditions of State Route 9A with one lane closed.

Comment Summary 17-4: The SDEIS identifies three signalized intersections along State Route 9A that would be impacted by proposed construction: State Route 134, Chappaqua Road, and North State Road. Intersection capacity analyses were only performed at the intersection of State Route 9A and North State Road. The analysis used traffic volumes collected in 1996, and is too old to be used for capacity analysis, even with adjustments. Intersection turning movement count data, collected in 2001, should be collected for all of the three affected intersections along State Route 9A and used to analyze their respective intersections. The capacity analyses that were performed used the SYNCHRO model, which, while the software does estimate capacity, is primarily designed to optimize traffic signal timings. It would be more appropriate to utilize Highway Capacity Software for the analyses.

17-4 It is acknowledged that intersection capacity analyses were not performed at the intersections of State Route 9A/Route 134 and State Route 9A/Chappaqua Road. Based on the results of the capacity analysis of the intersection that was analyzed, the SDEIS recommended that Millennium avoid construction during the morning peak period within 300 feet of the signalized intersections on State Route 9A that may be impacted by pipeline construction. Because of this recommendation, it was deemed unnecessary to collect additional data (existing data was unavailable at the time of the SDEIS preparation) and unnecessary to analyze the remaining intersections.

The version of SYNCHRO (Version 4) that was used for the level of service analysis of the intersection of North State Road and State Route 9A employs the same methods contained in Chapter 9 (Signalized Intersections) of the *1997 Highway Capacity Manual*, the same methodology that Highway Capacity Software (Version 3.2) is based upon. A representative of the NYSDOT confirmed that SYNCHRO is accepted by NYSDOT as a tool for the analysis of an isolated signalized intersection. The use of SYNCHRO to estimate the level of service of the intersection, therefore, was appropriate.

Comment Summary 17-5: The analyses completed for State Route 9A and North State Road contain computational errors, including analyzing the intersection with Right Turn on Red as permitted on the State Route 9A approaches when it is actually prohibited on all approaches to this intersection. In addition, a peak hour factor of 0.95 was used in the analyses, when the default value listed in the *Highway Capacity Manual* is 0.90. These errors have the effect of overestimating roadway capacity and understating the impacts of proposed construction on State Route 9A.

17-5 Comment noted. Section 5.8.4 of the FEIS have been updated to reflect the revised annual growth rate of 2 percent for traffic volumes, revised peak hour factors (based on count data) and the fact that Right Turn on Red is not permitted on all approaches to this intersection.

Comment Summary 17-6: Based on the capacity analyzes performed, the SDEIS notes that the LOS of the State Route 9A approach, during the morning peak hour, would deteriorate from LOS B (10 second delay) for the existing conditions

to a LOS F (85 second delay) if one lane is closed due to construction. The SDEIS states that this increase in delay "would be acceptable". No project that increases delay for approximately 1,000 vehicles by more than 1 minute per vehicle can possibly be considered acceptable.

17-6 A project which causes delay of over 1 minute per vehicle that would affect approximately 1,000 vehicles on a permanent basis would certainly not be acceptable. However, in a temporary construction situation, this increase in delay may be considered acceptable. The SDEIS does recommend that Millennium avoid construction during the morning peak period within 300 feet of the signalized intersections on State Route 9A. If the recommendation is implemented, capacity at the signalized intersections should be unaffected by the pipeline construction. Current NYSDOT policy is to not allow construction within a signalized intersection during the morning and evening peak hours.

18. CITY OF MOUNT VERNON (S11, C10, O1, O5, Various WC)

Comment Summary 18-1: The City of Mount Vernon is too densely populated for a pipeline and the pipeline would lower the quality of life and property values.

See response to comments below.

Comment Summary 18-2: The proposed project would disrupt all of the community of Mount Vernon, specifically the surrounding and adjoining neighborhoods where there is a large low-income housing complex, a neighborhood health center, senior residence, a senior center, schools, day care centers, and a large historic church. This project has only become public in the last 2 weeks although the plan has been in the works since December 1997. The citizens of Mount Vernon do not want this or any other natural gas pipeline in Mount Vernon. This is a predominately African American community and there has been little consideration of the people who live, work and worship here.

Comment noted. We have recommended that Millennium work with local officials and representatives of the community regarding installation of the pipeline in city streets so as to minimize disruption to the community.

Comment Summary 18-3: The materials considered by the Commission in its review of the project do not adequately consider critical issues concerning Mount Vernon, especially affects on the human environment such as quality of life, safety, impacts on infrastructure, and social structure.

18-3 Comment noted. We believe the FEIS adequately addresses environmental issues.

Comment Summary 18-4: The Commission must reject the unsustainable assertions [regarding the presence of low income and minority populations] and insufficient analysis. Based on 1990 census data, the City of Mount Vernon has a large minority population (about 60 percent non-white), a per-capita income of $15,835, which is at the lower end of the range of areas reviewed in table 4.10-1, and about 11 percent of the population lives below the poverty level.

18-4 Comment noted. However, we do not believe that there are disproportionately high and adverse health or environmental risks to any population associated with construction and operation of natural gas pipelines. Once constructed, the pipeline would operate in a manner similar to existing pipelines and utilities located within the roadbed.

Comment Summary 18-5: There does not appear to be any existing infrastructure at the proposed termination point that would make the site unique or compelling. The applicant's proposal to build a new aboveground station adjacent to a health center, church, large playground, and housing development is ill-considered.

18-5 The FEIS contains a revised termination point for the project. The new terminus would be located at the intersection of West 4th Street and South 7th Avenue, one block east of the health center and church. Millennium must tie in to the existing ConEd 20-inch diameter pipeline at that location since this the northernmost end of that pipeline. This is a unique requirement that necessitates the termination of the Millennium pipeline at this point. No aboveground facilities are proposed at this interconnection between the ConEd and Millennium pipeline facilities. All pipeline facilities would be placed beneath the roadbed.

Comment Summary 18-6: Alternative sites for terminating the Project must be more fully evaluated.

The nearest existing ConEd 20-inch-diameter pipeline is at a point near the intersection of West 4th Street and 7th Avenue. Because the proposed Millennium Pipeline must tie-in to this existing pipeline system, the terminus site was predetermined by the location of the existing ConEd pipeline. Also see section 6.3.17 for discussion of three alternate routes to the tie-in with ConEd.

Comment Summary 18-7: FERC has not performed an analysis of the particular health and safety issues potentially affecting sensitive institutions and residences in Mount Vernon.

18-7 The EIS contains a safety section and discusses the risk of pipeline failure (see section 5.12). It is not reasonable or practical to "detail" the hazards of a rupture for specific structures when land use and other sections of the FEIS already discuss what is along the route. In the FEIS, we have expanded our discussion of potential impacts in the urban areas of Westchester County. We have also recommended that Millennium continue to work with the affected municipalities to develop appropriate mitigation for potential impacts on traffic, emergency services, and public safety. The pipeline is a utility that would be installed and maintained in the street in accordance with USDOT regulations that specify construction, design, and operational standard requirements for the safety and protection of the public.

Comment Summary 18-8: The Commission has failed to consider construction related impacts, particularly as may affect Mount Vernon Hospital, the Neighborhood Health Center, two fire stations, the Hamilton Elementary School, and several houses of worship that would be directly affected by construction-related activities. The City of Mount Vernon has concerns regarding emergency access during construction.

18-8 Millennium has developed generic plans that include traffic control measures for in-street construction in Westchester County. The detailed, site-specific plans would be finalized with Millennium, appropriate authorities in Mount Vernon, and the construction contractor. These plans would be filed with the Commission for review and written approval of the Director of OEP before construction. Most impact in any one area of construction would be short-term, lasting only a few days, as in-street construction would progress at about 200 feet per day but may be as little as one pipeline joint per day. Unlike standard overland construction techniques, this segment of the pipeline would be installed one joint at a time. Trenching would be limited to that needed to install the pipeline during that workday and backfill would be completed as soon as the pipe is installed in the trench. Access to individual residents may be temporarily limited during actual pipe installation, but would not be cut off for long periods of time. Specific provisions would be included to maintain access to emergency service providers at all times.

Comment Summary 18-9: There is no analysis of the potential impacts of the project on Mount Vernon's infrastructure, specifically aging vitrified clay pipe stormwater and sanitary lines, and the city's 36-inch transition water main.

Prior to construction, Millennium's contractor would identify and locate all existing utilities crossed by the proposed route. During construction, Millennium would be responsible for maintaining service on these utilities, and to repair, as needed, any damage caused by construction of the pipeline. See section 5.8.2 of the FEIS, Construction in Yonkers and Mount Vernon.

Comment Summary 18-10: Sufficient consideration has not been given to the project's impacts on the social structure of Mount Vernon, including houses of worship, schools, and community centers. As proposed, the project would terminate directly in front of the Greater Centennial African Methodist Episcopal Zion Church and pass the Hamilton Primary School, Doles Community Center, and Levistor Towers, a large senior public housing complex. The Commission must consider impacts on these community resources.

The implication is that construction and operation of the project would have a long-term impact on the community resources listed above. We believe that the primary impacts of pipeline installation in the streets would be those associated with disruption during construction and these impacts are limited to about 4 months in the City of Mount Vernon. This is a short-term impact. As discussed in the response to C10-8, Millennium would develop plans for in-street construction that address traffic control, parking, and access to abutting properties, businesses, and other facilities.

Comment Summary 18-11: Construction of the project will cause major disruption to the City of Mount Vernon's economy. Impacts on local businesses and area rail transportation should be addressed.

18-11 We agree that the project may temporarily affect local businesses in Mount Vernon during installation of the pipeline in the street in front of the businesses when access to the business may be partially blocked. We have recommended that Millennium develop site specific plans to address issues of construction timing, maintaining access to businesses and residences, traffic detours, notification of residents of upcoming construction, maintenance of construction equipment to reduce air and noise pollution, and utility crossings. Following construction, no long-term impacts on area businesses or traffic patterns would result. See response to comment letter O4 regarding the crossing of the Metro North railroad lines.

Comment Summary 18-12: FERC has not considered the impact of the project on area property values.

We have included a discussion on property values in section 5.10 of the FEIS. Our review of recent studies indicates that the presence of a pipeline easement, in and of itself, would not create a measurable loss in property value. The proposed pipeline would be installed similar to other utilities within the roadbed, and would generally not require acquisition of easements on private property.

Comment Summary 18-13: FERC has not adequately evaluated the potential noise and air impacts in Mount Vernon.

Impacts from noise, dust, and air pollution near construction areas would be minimized, by properly maintaining construction equipment, using appropriate dust control measures, and conducting construction activities during daylight hours. Construction activities in any one area would be temporary, typically lasting several days to a few weeks, limiting the exposure of residents. Well-maintained engines emit lower air pollutant amounts and well-maintained mufflers and engines are the quieter. Also, see discussion in section 5.8.2 of the FEIS.

Comment Summary 18-14: The City of Mount Vernon asserts that development of post-certificate mitigation plans is improper and illegal.

NEPA does not require every detail of a project to be finalized before a project can be approved. NEPA does require an informed decision of the environmental impact to be part of the decision making process. The use of post-certificate mitigation plans is not illegal. Millennium has developed generic mitigation plans for in-street construction in Westchester County. Millennium's contractor, in consultation with appropriate authorities, will develop detailed, site specific plans to address traffic control, parking, and access issues. These plans will be filed with the Commission for review and approval prior to construction.

Comment Summary 18-15: No identification or analysis of alternative routes through the City of Mount Vernon has been completed.

18-15 We focused our analysis on the route proposed by Millennium. However, we have evaluated an alternative route to the end point at West 4th Street and 7th Avenue (see section 6.3.17 of the FEIS). Our review indicates any alternative route through the City of Mount Vernon would result in similar construction-related impacts, and the transfer of these impacts to other residents and businesses has not been justified. NEPA does not provide for open-ended opportunities to offer more alternatives for study.

Comment Summary 18-16: The Commission should evaluate the impacts of ConEd's construction activities in association with the Millennium Project.

18-16 To our knowledge, ConEd has not proposed construction of specific additional facilities to accommodate either the Millennium or Iroquois projects, or both. ConEd is not an interstate natural gas company and does not fall under the FERC's jurisdiction. Any construction ConEd might propose would be subject to the permitting requirements of the PSCNY.

Comment Summary 18-17: The pipeline will disrupt all of the community and specifically the surrounding and adjoining neighborhoods where there is a large low-income housing complex, a neighborhood health center, senior residence, a senior center, schools, day care centers, and a large historic church. Although this plan has been in the works since December 1997, it has only become public in the last few weeks when there was a hearing in Mount Vernon that was attended by representatives from Milllennium, ConEd, and county and local officials.

Comment noted.

Comment Summary 18-18: The pipeline will be adjacent to the Hamilton Elementary School which has an enrollment of 560 students. Construction will be very disruptive to the children, staff, parents, and the community.

In section 5.8.2.2 of the EIS we state that although construction is scheduled for the summer when most schools are closed, many schools have summer programs. We have recommended that Millennium develop site-specific construction plans for construction adjacent to the Hamilton Elementary School. This plan would include measures to assure adequate movement of emergency equipment during in-street construction activities and the safety of students while at school and as they travel to and from school. This plan would be developed in consultation with the local municipality and emergency service providers before construction and would require the review and written approval of the Director of OEP.

Comment Summary 18-19: According to a recent article, Millennium proposes to terminate its pipeline at West 4th Street and South 8th Avenue in Mount Vernon. This will have a devastating effect on the most densely populated neighborhood in the most densely populated community in Westchester County. The pipeline should not be sited adjacent to the Mount Vernon Neighborhood Health Center, Levister Towers, and one of the county's most historic churches.

We have recommended an alternative pipeline termination point at the junction of West 4th Street and South 7th Avenue, one block away from South 8th Avenue, the Mount Vernon Neighborhood Health Center and the Greater Centennial African Methodist Episcopal Zion Church.

Comment Summary 18-20: Those impacted by this proposal should not have to rely on the media for information and representatives from Mount Vernon Neighborhood Health Center, Levister Towers, and the Greater Centennial Church should be participants in all meetings and discussions.

We have recommended that Millennium develop site-specific construction plans in consultation with the local municipality, emergency service providers, and community representatives (see section 5.8.2 of the FEIS, Construction in Yonkers and Mount Vernon).

19. SAFETY (F C4, Various WC)

Comment Summary 19-1: The FEIS needs to include a more generalized failure analysis that details the hazards associated with a pipeline rupture or catastrophic explosion along the entire alignment as noted in comments on the DEIS. Also, as stated in comments on the DEIS, a more explicit protocol should be developed by Millennium that addresses the specific emergency procedures that will be implemented in case of a catastrophic incident.

19-1 The SDEIS included a more detailed description of safety requirements in section 5.11 that are also included in section 5.12 of the FEIS. We reiterate that pipeline safety is regulated by the USDOT.

Comment Summary 19-2: The Town of Greenburgh requests that the EIS address additional mitigation for the Villages of Elmsford and Ardsley and in the unincorporated Town of Greenburgh because of the proximity the large number of homes that are just seconds away in the event of a catastrophic accident.

19-2 The USDOT is responsible for establishing specifications for the safe and reliable operation of natural gas pipelines (see section 5.12 of the EIS). Additional mitigation is included in the MOU and SMOU which Millennium has agreed to use for its pipeline design and operation.

Comment Summary 19-3: The communities and residents along the proposed pipeline route deserve to know what recourse will be available in case of an incident and they must be informed of any liability limits to Millennium, Columbia, or any other associated companies. This information should be made available before a final certificate is granted.

19-3 This is beyond the scope of this EIS. As noted above, we have recommended that Millennium develop and implement an environmental complaint resolution procedure to ensure that landowner complaints are resolved in a timely and efficient manner. In addition, Millennium must comply with USDOT regulations that require that an emergency plan be developed to minimize the hazards during a natural gas pipeline emergency (see section 5.12.1 of the EIS).

Comment Summary 19-4: The ConEd Offset part of the ConEd/Taconic Parkway Alternative includes an area between MPs 396.0 and 398.0 that has no fire hydrants or other water source to extinguish fires. Once a fire starts, it is very hard to put out. Construction and operation of a pipeline in this area offers an unacceptable risk due to fire and/or explosions. A thorough fire and explosion analysis for this area should be conducted. There should be a moratorium on construction in this area until structural issues are properly addressed and the Croton Dam Road is re-opened.

19-4 USDOT Part 192 regulations prescribe the standards for operating and maintaining pipeline facilities, including the requirement to establish a written plan governing these activities. Under section 192.615, each pipeline operator must establish an emergency plan that includes procedures to minimize the hazards in a natural gas pipeline emergency (see section 5.12.1 of the EIS). Millennium would provide the appropriate training to local emergency service personnel before the pipeline is placed in service and would be responsible for handling the emergency. Concerns with the availability of water for fire suppression can be addressed during development of the emergency plan.

Comment Summary 19-5: ConEd believes that placing a pipeline within its powerline right-of-way would not be safe and the FERC acknowledges this risk. If there is any chance for pipeline accident near the powerline, then this type of risk would be the same if the pipeline was in our backyards.

Section 5.12 of the EIS discusses reliability and safety associated with operation of natural gas pipelines. The issues and risks identified with the placement of the Millennium pipeline within the ConEd powerline right-of-way are specific to that right-of-way, the electric load that it transports, and the terrain in Westchester County. The Commission has approved the installation of pipelines in important electric transmission corridors and has also required pipelines to be constructed within these rights-of-way to mitigate environmental impacts. These projects were constructed and are operated in a variety of terrains, including those with steep, rocky side slope areas where blasting was required. We believe that with the use of appropriate procedures for construction and operation of the pipeline and the proposed and recommended mitigation measures, the risk is minimal.

20. ELECTRIC SAFETY AND RELIABILITY (S3, S4, S10, C14, O17)

Comment Summary 20-1: The distance between the proposed pipeline and six 345 kV circuits along an approximate 6,000 foot segment in the Dunwoodie - Sprain Brook area is of concern. It has generally been agreed that when the six 345 kV circuits are in close proximity, the pipeline should be at least 1,500 feet from the circuits and, if that is not possible, that all reasonable mitigation measures should be incorporated into the design of the pipeline in such sections.

We believe that the distance between a pipeline and electric transmission lines is a function of the terrain, with a requirement that the pipeline should not be laid under a circuit path and must avoid a direct contact with the electric system's grounding, such as ground mats and counterpoises. We have no scientific basis to support the suggestion of a distance of at least 1,500 feet between the pipeline and ConEd's right-of-way. It appears that the concern is based on a scenario in which a gas pipeline explosion would take out all six high-voltage electric circuits. This concern seems inconsistent with the fact that pipeline crossings (existing and proposed) are not routinely raised as an issue. We agree with the Council's request that Millennium consult with the PSCNY and ConEd to determine whether any additional measures may be taken to mitigate the concerns raised herein.

Comment Summary 20-2: The SMOU provides that the pipeline be constructed no closer than 100 feet from the nearest conductor on the Buchanan-Millwood circuits (rather than the centerline of the southern towers as proposed by FERC) to the pipeline. Moreover, the PSCNY urges the FERC to reevaluate its conclusions regarding the PSCNY's concerns about the impacts of blasting and lightning and fault currents within the electric corridor.

20-2 We have no objection to the SMOU allowing the pipeline be constructed no closer than 100 feet from the nearest conductor (as opposed to 100 feet from the centerline of the outer row of transmission towers), thereby adding approximately 30-foot-wide strip to the pipeline corridor to provide more safety from blasting and working room during the construction phase. With regard to the second concern, we have stated, based on statistical data, that lightning is highly unlikely to cause gas pipeline explosion. We see no significant electrical impact, so long as the pipeline is not buried directly under the electric circuits or in direct contact with the tower footing and/or counterpoises. We have said that fault (ground) current follows its circuit path (i e., a metal pipe placed outside this path does not "attract" the short-circuit current). Until we have proof to the contrary, we cannot change our view on this.

Comment Summary 20-3: The PSCNY disagrees with FERC's assessment that risk of lightning arcing to the pipeline will not occur if proper mitigation measures are employed.

We said that lightning can strike anything anywhere. It can cause a brush fire and/or a short-circuit in the transmission system. A direct lightning strike can puncture a gas pipeline, which can result in a gas leak. A spark could then ignite the escaping gas, causing a fire. But a lightning strike by itself is not known to cause gas pipeline explosion. Proper grounding and appropriate clearance between the pipeline and the tower footing and counterpoises may help protect the pipeline from electromagnetic induction and from arcing due to an indirect lightning strike.

Comment Summary 20-4: The PSCNY states that in the case of a phase-to-ground fault, the fault current will "seek out, and may lead to the puncture of a buried pipeline." If lightning strikes a powerline it may result in damage to the pipeline coating, insulating fittings or the pipeline itself.

On the topic of ground faults, we maintain that a short-circuit current follows its circuit path and will not deviate from it. If a short-circuit current were able to deviate from its circuit path by means of buried metal pipes or

cables, the entire science on protective relaying (premised on the ground-current return) would have to be rewritten because one would never be sure of ever seeing the fault current – the correct one – again once it enters the ground. This is obviously not the case.

Most pipeline damages reported so far are due to pipe corrosion. Pipe corrosion is a slow process, primarily due to a natural ground potential creating a sufficient amount of direct current flow on the pipe on a continuous basis. A well-maintained cathodic protection system usually can mitigate this type of pipe damage. A lightning charge, fault current, or even the normal operation of the electric transmission lines can induce a small eddy alternating current on the pipe surface, and may even produce enough heat to deteriorate the pipe coating and insulating fittings. Good shielding and grounding of the pipe, coupled with rigorous inspection and maintenance, usually mitigates the problem.

Comment Summary 20-5: The counterpoise system may not have the capacity to take the magnitude of the fault current or be the path of least resistance.

20-5 Although lightning phenomena are still a subject of continuing research, we believe that lightning can induce high voltage, puncture cable and gas pipeline, and break insulators and/or conductors, causing a short-circuit in the electric power system. Lightning strikes can carry a charge of some 20 kA to 200 kA. It is highly concentrated and highly localized. Its duration is extremely short (in the range of tens to hundreds of microseconds). While ground wires and counterpoises are designed to amply handle fault currents, and to some degree, lightning discharges, a direct stroke of lightning with concentrated charge and at high velocity may exceed their capacity. That is why burnt-out ground wires and counterpoises in the aftermath of a severe hit by a lightning stroke are not unusual occurrences. They are simply repaired or replaced.

Comment Summary 20-6: The PSCNY states that the FERC suggests that in the case of lightning strikes and line to ground faults, the circuit breaker will protect the pipeline.

20-6 We have neither said nor implied that circuit breakers are designed to protect the pipeline. But rather, in the case of a broken live (hot) electric high voltage (EHV) line coming in contact with the pipeline (via some exposed parts of the pipeline, such as valves), the faulted EHV line will be tripped in a fraction of a second, primarily for system reliability purposes. But at the same time, this fast breaker action prevents an intense heat from developing to do more damage to the line and whatever the line touches.

Comment Summary 20-7: In the case of a phase-to- ground fault, the fault current will flow to ground. This current will seek out, and may lead to the puncture of a buried pipeline. In the event of a lightning strike, whether it strikes the tower or the ground (static) wire, the current generated by the lightning strike will flow through the towers to the ground and can puncture or damage the pipeline.

20-7 From some detailed information we have about pipeline damages due to electrical short-circuits and lightning,[3/] our assessment is that a lightning strike can break a conductor and that same strike can puncture a pipeline at practically the same time, thus giving an impression that the pipeline puncture is due to the resulting short-circuit current. While we do not dispute that an indirect lightning strike can cause arcing on the buried pipeline and puncture it, we do not, however, believe that a short-circuit current (stemming from a usual electric power system fault) can create a voltage breakdown of the soil to cause arcing on the pipeline.

Comment Summary 20-8: The ConEd Offset/Taconic Parkway Alternative, and the right-of-way alternatives in the SDEIS, propose co-locating the pipeline on the ConEd right of way. Line-to-ground faults, lightning strikes and electric induction in the pipeline all pose genuine risks of causing a catastrophic pipeline explosion. The SDEIS recognizes a risk from operating the pipeline in close proximity to high voltage wires, but states that "ConEd and PSCNY have overstated th[at] potential danger...." This statement is wholly unsupported by any science or study. Perhaps more than any other single statement in the SDEIS, this demonstrates the ominously indifferent approach that FERC has taken to the entire environmental review process in this proceeding. Numerous scientific reports provided by both ConEd and the PSCNY conclusively refute FERC's assumption that electric operating fault currents as well as currents due to lightning strikes do not jeopardize the integrity of the pipeline.

20-8 Though we recognize risks associated with operating a pipeline in close proximity to high voltage lines, pipelines and electric high voltage transmission lines can be and have been successfully co-located in the field

3/ Attachment C to USDOT's Report on "Accident/Incident Records Related to Lightning Strikes, Fault Currents, Stray Currents, Induced AC (1984 - 1999)."

for decades. In that sense, the Millennium Pipeline Project is sensitive but not unique. We have qualified the PSCNY's comment relative to concerns that: lightning causes gas pipeline explosion; corona could ignite gas vapor; short-circuit current can puncture gas pipeline; and buried pipelines "attract" fault current. In summary, we responded to each of the above concerns by indicating that: lightning strikes can puncture gas pipelines but are not known to cause explosions (USDOT data); corona could not ignite gas vapor for lack of strength (EPRI/ Transmission Lines); and pipelines buried outside the ground circuit path do not "attract" short-circuit current (Power Engineering class notes – Carson's experiment). On the last phenomenon, for which a PSCNY witness states that a buried pipeline "attracts" short-circuit current, please refer to our response above.

Furthermore, we note that the PSCNY has developed a MOU and a SMOU that contains the construction specifications for constructing Millennium's pipeline along the ConEd powerline. These specifications and the USDOT's requirements would ensure that Millennium's pipeline would be "properly engineered" to be constructed, operated and maintained in the vicinity of the ConEd powerline and at other locations along this segment of the route.

Comment Summary 20-9: In addition to fault currents, lightning strikes also pose a major risk to the pipeline which FERC staff has ignored. FERC staff has actually gone so far as to conclude that "this pipeline would be much better protected from lightning strikes because the transmission towers and conductors would "act as a good shield for any installation along the right-of-way." Such blithe statements demonstrate a frightening misunderstanding of how the ConEd facilities function. Contrary to FERC staff's "protection theory," ConEd's transmission towers and their grounding rods "actually funnel lightning strikes to the ground in the vicinity of a co-located pipeline, thereby increasing the potential for damage to the pipeline." ConEd has provided a study that demonstrates this to be so. (See Attachment No. 2, *Breakdown Gradient Of The Soil Under Lightning Discharge Conditions.)"*

20-9 We believe there is a higher probability of pipeline being damaged (or punctured) if the pipe receives a direct lightning strike than if it is "hit" by a discharge from an indirect lightning strike. Therefore, co-locating a pipeline along the right-of-way of electric transmission lines would further reduce that probability of exposing the pipe to direct hits. From the Attachment No. 2 mentioned above, we may quote the author of *Breakdown Gradient Of The Soil Under Lightning Discharge Conditions* as follows: "Powerlines are usually equipped with shield wires. When lightning strikes the powerline, only a portion of the stroke current gets discharged through the footings of any one tower. This limits the gradient potential rise thus reducing the frequency of arcing to an adjacent pipeline."

Comment Summary 20-10: Should the fault current or current from a lightning strike arc onto the pipeline, it may "melt" it where it first contacts the pipe or where it leaves the pipe. This would "leave a hole in the pipe" resulting in gas leakage that "could readily result in a major fire and damage" to transmission facilities and, likewise, to nearby residences.

20-10 We believe there is a big difference between a (short-circuit) fault current and a current resulting from a lightning discharge: A short-circuit fault current has to return to its source via a definite ground path and ground (or shield) wires. Whereas, a current (of much higher magnitude) due to lightning discharge has no source to return to. Hence, when a lightning strike hits the ground, it ionizes the soil around its contact point, and if strong enough, it can produce an arcing (or a flashover) on a pipeline buried nearby. The flashover can puncture the pipeline. US DOT data, collected since 1984, have indicated that lightning strikes can cause a hole in a gas pipeline and create a gas leak. A gas leak can be ignited by a man-made or electrostatically-produced spark and a fire may result. But, a lightning strike per se has not been reported as having caused a gas pipeline explosion. A buried pipeline, when properly separated from counterpoises, ground rods, and the electric ground circuit path, will not "attract" short-circuit fault current away from its return path back to its source. We have not documented any short-circuit fault current that was strong enough to puncture a pipe lain across or along an electric transmission line right-of-way.

Comment Summary 20-11: As it does with the Fault Current Lightning Strike Study, the SDEIS discounts the need for electromagnetic studies, without the benefit of factual support. Such studies, however, are required as a matter of good utility practice and are commonly performed where transmission and pipeline facilities are co-located. In sum, two critical "electrical mitigation design studies" have not been conducted to validate the assumption that the pipeline can be operated safely 100 feet from the nearest conductor. Without these studies, and an assessment of risks to both ConEd's facilities and adjacent homes, FERC's consideration of the ConEd Offset/Taconic Parkway Alternative as viable is rank speculation, and does not permit the consideration of reasonable alternatives that is the hallmark of NEPA analysis.

20-11 The commenter has misinterpreted our position on these studies. For a project of this magnitude, we believe one should proceed in stages. Our principal purposes in preparing this EIS are to: identify and assess the potential environmental impact of this Millennium Pipeline Project; assess and recommend reasonable

alternatives; and encourage and facilitate public involvement in identifying significant environmental impact. An EIS does not need or require the completion of every engineering, economic, or other study before the environmental analysis can be completed. These engineering studies would be completed by Millennium based on site-specific conditions when a final route has been approved and access cannot be impeded. It is not reasonable to expect an applicant to complete them for every alternative that is being examined. Therefore, we have not waived or discounted the need for actual field tests before the actual construction work starts.

Comment Summary 20-12: Commenter visited and reviewed the proposed route through the Town of New Castle and ongoing construction of a gas pipeline along State Route 100 near State Route 117 along the ConEd right-of-way. From the visit, it was learned that: gas pipelines have been located between powerlines further upstate in Broome County; there are many existing gas pipelines throughout Westchester County that safely service heavily urbanized areas, including the City of White Plains; pipelines cross beneath overhead electrical lines in many Westchester locations without incident; and pipelines can be and are safely designed and installed to mitigate any interference from overhead powerlines as well as from the tower grounding lines that diffuse lightning hits. Also, it was observed that the ConEd gas pipeline will be in close proximity (10 to 15 feet) from the bases of existing towers. Installation of that pipeline is proceeding without apparent risk to the pipeline, the motorists driving along the route, or people living nearby. Based on the above, why is the PSCNY requiring Millennium to construct the pipeline so far from the powerlines so that a wide swath of trees will have to be sacrificed leaving adjacent residents' properties exposed, the quality of life for the homeowners diminished, and the Teatown Lake Reservation green space threatened.

As discussed in section 6.1.1 of the SDEIS and sections 6.2.1 through 6.2.3 of the FEIS, we believe that construction of the pipeline between the electric transmission towers, or too close to these towers, would pose an undue risk to the reliability of electric supplies to New York City and parts of Westchester County on this extremely sensitive corridor. There are also differences in the types of material used for the ConEd pipeline (plastic) and the Millennium pipeline (steel), pressure of the gas within each pipeline, diameter of the pipelines, different concerns regarding grounding and cathodic protection, and the consequences of pipeline rupture. There are also differences in the types of soils in Broome and Westchester counties which affect the design of the facilities for grounding and cathodic protection.

Comment Summary 20-13: What are the electromagnetic and static effects of high-pressure gas flowing in a pipe closely adjacent to high voltage electric lines? Commenter has read the studies, which don't indicate that this type of arrangement is safe. Why risk lives when alternative routes are available?"

20-13 Electromagnetic induction produces eddy current and deposits electrostatic charge on nearby metallic structure. The eddy current, when significant enough, can generate heat that could damage pipeline coating. The electrostatic charge (static) can produce sparks. If the pipeline has a leak in close proximity, these sparks could ignite gas vapor and cause a fire. Fortunately, measures to mitigate these potential problems are well known in the pipeline construction industry and have been applied with satisfactory results. In fact, there have been instances where gas pipelines are buried alongside electric transmission lines and those pipelines are reported to have operated relatively safely. With public safety concerns in the forefront , we are always disposed to recommend an alternative that would reduce these risks to a minimum.

Comment Summary 20-14: The proposed route passes through many natural rock outcrops. The company installing the pipeline, Columbia, has indicated that 75 percent of the route through this area would require blasting as part of the installation process. This will risk a major catastrophe with adjacent high voltage lines – not to mention the impact of damage to homes along the pipeline route, including water wells and septic tanks.

In the SDEIS, we have acknowledged that dangers caused by rock blasting and trench excavating are real. We support the project with the premise that the Millennium Pipeline carries out its activities during the construction and during the operation of the pipeline in strict compliance with the MOU reached between Millennium and the PSCNY. The MOU addresses, among other things, safety concerns previously cited by the PSCNY.

Comment Summary 20-15: During construction of the pipeline, the close proximity of the high voltage lines could result in a major accident – for instance, construction equipment hitting high voltage lines. Not only would this likely result in loss of human life – but also would knock out electricity for much of New York City and the surrounding area. In fact, the last major power outage in this area caused by these very power lines shorting out – which resulted in a power failure almost 24 hours long. ConEd, the local utility, even opposed this proposed routing.

The sensitivity of the ConEd's Westchester right-of-way has been of concern to NYSRC, PSCNY, and ConEd. We have acknowledged that these electric transmission lines carry over 40 percent of the load of New York

City. We may recall the last two major New York City blackouts of 1965 and 1977. In both of these incidents, the cause was pinpointed to an "act of God" during heavy loading of the lines rather than to any accidental human activities in the vicinity of these lines. We, of course, do not discount the possibility that there can be damage done to the lines due to other causes – human errors or otherwise. Precisely because of these concerns, we believe that New York City should have more in-city (back-up) generating capacity in order to make a failure of the electric power import over the Westchester right-of-way more manageable. And to increase the in-city generating capacity to meet an ever increasing demand, more natural gas (as well as the pipeline system) will be needed to run additional generators.

Comment Summary 20-16: While contrary to the vested business interests of Millennium, has increasing electric transmission capacity over the ConEd right-of-way been investigated instead of building the gas pipeline?

The current total capacity of the Westchester right-of-way (6 circuits), we believe, is rated at about 10,000 MW, based on a ConEd 1999 Summer Peak Load-flow Case. But the normal loading of the lines is kept around 5,000 MW. The reason the lines cannot be fully loaded to their capacity is because of reliability concerns, which can be explained as follows:

(a) In the case of New York City, electric system reliability becomes worse when more electric power is imported into the city over the same right-of-way. This situation can be likened to putting all your eggs in one basket.

(b) The actual operation of the ConEd's electric system is based on a delicate balance of reliability and economy (percentages used are for illustration purposes only): import cheaper power and energy from the hydro sources in the north in a manageable amount (45 percent), make contractual purchases of PJM's power from the west (20 percent), and the rest (35 percent) will be filled by in-city generation. Should failure of the Westchester right-of-way occur, the in-city generating capacity and the tie to PJM must be able to take up the slack. This means the in-city generating capacity should represent 80 percent of the New York City demand. Hence a need for additional sources of energy, i. e., more natural gas supplies and transmission pipeline capacity, to run in-city power plants.

(c) There are of course other possible ways to increase electric power import into New York City over the ConEd's Westchester right-of-way, such as re-conductoring the Westchester right-of-way lines, stepping-up the lines' voltage, building more circuits into New York City over the same right-of-way. But, unfortunately, all these alternatives do not offer enough diversification. The result will still make the New York City subject to the same reliability concern as that existing presently. Here is the paradox concerning the Westchester right-of-way. In order to import more energy and power over the ConEd's Westchester right-of-way lines, there must be more in-city installed generating capacity.

(d) Additional electric transmission capacity from the west would increase ConEd electric system reliability, as long as it is independent from (or not in a common-mode failure with) the Westchester right-of-way. (Independent lines mean the failure of one will not cause the failure of another. Lines in common-mode failure means a collection of lines that can fail as a group due to a common cause.)

Comment Summary 20-17: FERC staff's aversion to certain risks and its acceptance of other risks is arbitrary. The Staff fails to quantify either the acceptable or the unacceptable risks. The staff further fails to articulate a standard for differentiating acceptable and unacceptable risks. The staff analysis and recommendation reduce to an intuitive notion that operational risks are low and construction risks are higher. Under circumstances affecting a vital public interest, such an intuitive standard is unsatisfactory.

We find that ConEd's argument faulting staff for not having provided a quantitative analysis relative to assessing risks and setting a standard for differentiating acceptable and unacceptable risks at this stage as disingenuous. Before making any recommendation on this matter, staff carefully reviewed all of the material filed by the PSCNY and the NYSRC. The material filed by the PSCNY and the NYSRC detailed their concerns about the danger posed during the Millennium pipeline construction phase to ConEd's transmission system. In the SDEIS, staff noted the compelling case made by the PSCNY in this regard. Also, staff's position on the relative safety of the Millennium pipeline during its operation phase is based, in part, on the information collected by the USDOT on incidents involving pipelines buried in the vicinity of electric transmission lines. Therefore. ConEd's assertion that "staff's aversion to certain risks and its acceptance of other risks is arbitrary" is misplaced. Nonetheless, staff believes that ConEd can play a positive role in this matter, given its experience with constructing and operating gas pipelines across and in close proximity to its electric transmission lines right-of-way.

Comment Summary 20-18: However, more troublesome is the fact that staff recommends acceptance a small risk of mishap that would have a catastrophic effect on electric service in New York City and/or Westchester County. A mishap – whether it occurs because of a construction risk or an even smaller operational risk – would have the same catastrophic effect on electric service in New York City and/or Westchester County. Such a risk may not be taken lightly and without exhausting other alternatives that would avoid the risk altogether – including joint projects with other interstate pipeline that would interconnect with Con Edison's facilities outside of Westchester County.

20-18 ConEd seems to take issue with our position relative to "risk reduction" rather than "risk avoidance." We believe that such a major energy transportation project, in such a sensitive area as New York City, entails some risk – not only to the Westchester electric right-of-way but also to the public at large. We will support a plan that reduces that risk to a minimum. We note that ConEd also accepts some risk when it cautions that: "Observance of the requirements (associated with blasting preparations) would not assure that blasting could be done without damage to the transmission facilities. However, failure to observe such requirements would increase the risk of damage associated with the blasting activities."

Comment Summary 20-19: The SDEIS discounts the need for electromagnetic studies, without the benefit of factual support... The SDEIS assumes that the three routing alternatives present no differing or significant inductive concerns... Inasmuch as induced voltages are a function of separation distances, the three alternative routes necessarily present varied induced-voltage concerns.

We do not discount a need for electromagnetic studies. We said that electromagnetic induction (of EHV lines) on surrounding structures has been well studied and resolved through proper shielding and grounding. It is obvious that, in qualitative terms, the three alternative routes remain subject to the influence of electromagnetic induction of the Westchester electric transmission lines. Neither one of the three alternative routes can be rid entirely of electromagnetic induction. Hence, no alternative can have an advantage over the other as far as electromagnetic compatibility is concerned. However, we agree, in a later phase, that quantitative analysis will distinguish those alternative routes in terms of the magnitude of electromagnetic problems and costs to mitigate them.

Comment Summary 20-20: The SDEIS correspondingly dismisses the short-circuit concerns as unlikely and concludes that the co-location with transmission facilities may actually reduce the risk of the pipeline to lightning strikes... Having dismissed the significance of short-circuit concerns, the SDEIS concludes that the three alternative Millennium routes are indistinguishable in this regard.

20-20 When it comes to lightning strike and electrical short-circuit, ConEd's argument seems to be very indecisive as to which subject that is being discussed. Lightning discharge and electrical short-circuit are two different phenomena, even though they may be expressed in the same unit (ampere). Lightning discharge is caused by lightning stroke whether there are electrical facilities located nearby or not. Whereas electrical short-circuit occurs when electrical wires touch the ground or come in contact with each other whether there is a lightning strike or not. Of course, a lightning strike can cause an electrical short-circuit by rendering electrical insulation ineffective. One important characteristic is that electrical short-circuit current flows back to its source through a defined path in the ground and on ground-wires. It does not seek out a metallic pipeline if the pipeline is buried outside its circuit path. However, lightning-discharge current has no source to return to. When discharged, it either hits a spot on the ground in an open field or flows from an object in high elevation to ground.We believe there is a higher probability of pipeline being damaged if the pipe receives a direct lightning strike than if it is a discharge from an indirect lightning strike. We thus conclude that a pipeline buried between rows of high towers and lines may find a good protection against direct lightning strikes. Given that the three alternative routes are still vulnerable to direct and indirect lightning strikes, and without any quantitative data available to us at this stage, our assessment is that, as far as risks due to lightning strike are concerned, they have no advantage one over the other.

Comment Summary 20-21: The SDEIS even faults the PSCNY for failing to provide an engineering analysis of ground current phenomena.

We mentioned to the PSCNY that we wanted a copy of a study that shows that a metallic pipeline buried in the vicinity of electrical transmission lines "attracts" electrical short-circuit current and gets damaged in the process. Our request had to do with our desire to review our technical understanding rather than to fault somebody for lacking back-up materials. By the way, we appreciate receiving ConEd's paper discussing the potential for lightning arcing between a pipeline and a transmission tower. We believe information of this nature will reinforce our understanding in our search for an optimum solution in this Millennium Pipeline Project.